THE

Medical and Physical Journal.

VOL. I.] APRIL, 1799. [NO. II.

History of the Inoculation of the Cow-pox.

(Continued from page 12 of our last.)

The following Communication from Dr. PEARSON *continues the subject down to the date of it, and shews how rapidly the practice increases.*

SIR, *Leicester Square, March 12, 1799.*

I Hope you will pardon me for taking the liberty to inform you, by way of additional evidence to the testimonies I have published on the subject of the cow-pox, that upwards of one hundred and sixty patients, from two weeks to forty years of age, principally infants, have been inoculated since the 20th of January last, by Dr. WOODVILLE and myself, separately.

I shall at present only communicate the following observations:—

I. Not one mortal case occurred.

II. Not one of the patients was considered to be dangerously ill.

III. Although the extreme cases of the severe kind, which ordinarily occur, in the same number of cases, in the inoculated small-pox, did not occur in the above practice; and although many of the patients were even more slightly disordered constitutionally, yet the whole amount of the constitutional illness seemed to be as great as in the same number of patients in the inoculated small-pox.

IV. None of the patients, namely, above sixty, hitherto inoculated for the small-pox, subsequently to the vaccine disease, took the infection.

V. One of the most important facts is, that the local affection in the inoculated part, on the whole, was less considerable, and of shorter duration, than in the inoculated small-pox.

VI. In many of the cases, eruptions on the body appeared, some of which could not be distinguished from the small-pox.

I have ſent the matter of the cow-pox puſtule, on the thread incloſed, in order, if you approve of the inquiry, to inoculate with it; and I intreat you to favour me with the reſult of your trials; but I muſt trouble you to apply the teſt of inoculating with variolous matter ſubſequently to the vaccine diſorder. I have the honour to be,

SIR, your moſt obedient, and moſt humble ſervant,

G. PEARSON.

P. S. I am happy to be able to ſtate, that at Berkeley, Dr. JENNER has continued his trials of inoculation with vaccine matter, ſent from London, with good ſucceſs.

I ſhould have given you a more circumſtantial account of the caſes here alluded to, but I think it unneceſſary, as Dr. Woodville has a pamphlet in the preſs on the ſubject.

FOR THE MEDICAL AND PHYSICAL JOURNAL.

On the Origin of the Cow-pox, with a few Remarks on the Pox of Swine.

(By Mr. LAWRENCE, Author of a 'Philoſophical and Practical Treatiſe on Horſes, and on the Moral Duties of Man towards the Brute Creation,' 2 vol. 8vo.—&c. &c.

IT is in conſequence of particular requeſts, that I reſume my pen, to offer a few practical remarks on the origin of a diſeaſe, which a recent, and moſt ingenious diſcovery, has rendered ſo generally intereſting. I have not the preſumption to ſuppoſe, that my obſervations, although by no means lightly made, can be of any conſiderable moment; but in a matter of public concern, a man's endeavours evince, at leaſt, his alacrity and good-will; and I am proud to contribute my mite, amongſt the more important, and ſtrongly-grounded opinions, of ſcientific and profeſſional men, ſo much more amply prepared for the inveſtigation.

In the firſt place, I muſt beg leave to differ conſiderably in opinion, from a reſpectable correſpondent of the Journal, Dr. SIMS, who intimates that "all hazardous experiments ought to be diſcouraged." Such a poſition, I think, is too much in the ſpirit of ancient prejudice, the grand retarder of all improvement, which can ſeldom make a progreſs without conſiderable riſk, and preſent inconvenience. Upon ſuch principles, inoculation for the ſmall-pox, which has preſerved ſo many valuable lives, and contributed ſo much to the health and perſonal appearance of ſuch numbers, in this country particularly, would have been, at

this

this day, unknown and unpractiſed. Every one, who has read upon this ſubject, well knows the ſtrenuous oppoſition which the firſt inoculators had to encounter, both in England and America, from vulgar prejudice; and that ſome of them, with their patients, found a difficulty even to eſcape with their lives. Dr. Sims has adduced a ſingle inſtance of inveterate and loathſome cow-pox, and of its failure as a preventive of the ſmall-pox. Without doubt, all due attention ought, and will be paid to this inſtance, but no more. Examples on the favourable ſide are much more numerous and preciſe. There have been alſo reports, apparently well-founded, of a recurrence of the ſmall-pox. As to the peculiar loathſomeneſs of the cow-pox, all infectious and eruptive diſeaſes are ſufficiently ſo; but with reſpect to the natural purity of the animal juices, none can be more truly ſo, or more wholeſome, than thoſe of the cow. In this affair, the medical faculty have ſtrictly performed their duty, both as good patriots, and as men eager for the propagation of ſcience. The diſcovery is fully and fairly in the way of experiment, and will ſtand or fall by its own merits.

My remarks on the preſumed origin of the diſeaſe, namely, that it proceeds from the greaſe of horſes' heels, inoculated into the teats of cows, I hope, will not be conſtrued into any diſreſpect, or affected oppoſition to Dr. Jenner, whoſe abilities and activity in profeſſional purſuits, I admire, and to whoſe phyſical opinions I feel diſpoſed to pay the utmoſt deference. Indeed, I am inclined to ſuppoſe the Doctor publiſhed that ſingular hypotheſis, rather out of compliance with the ideas of the people he was obliged to conſult, than as the reſult of his own mature reflection. A very ſlight conſideration would determine, *a priori*, the utter improbability of the fact, had not its impoſſibility been already proved, by a ſufficient number of accurate experiments*. It is in oppoſition to all analogy, and to the invariable determinations of nature, to ſuppoſe, that a ſimple, innoxious humour, ſhould poſſeſs the power of generating infection. Such a humour is the greaſe, primarily, in the heels of horſes. The eruption of this humour is generally occaſioned by defective abſorption and circulation in the lower extremities of the animal, whilſt continued long within doors, in a ſtanding poſture, and conſequent ſtagnation; its prevention—exerciſe, and much friction of the legs by the groom, with a minute attention to cleanlineſs, or voluntary exerciſe abroad. This is the caſe with all horſes, in a greater or leſs degree: and examples of thoſe in a ſound and healthy ſtate, greaſed *in few days*, by ignorant and incapable grooms, are innumerable.

Dr. Jenner,

* See Mr. Simmons, on Cow-pox, &c.

Dr. Jenner, however, no doubt aware of this impediment, obſerves—"Horſes with heels diſeaſed in that peculiar way, which I conceive to produce cow-pox, were ſo rarely met with, during the progreſs of the experiments, as not to be within my reach." The Doctor rationally expected a degree of acrimony ſufficient for the purpoſe of infection, in the matter of the chronic and inveterate greaſe alone. There is no novelty or doubt in regard to the virulence of corrupt and ſtagnant fluids; nor is it at all improbable, but an animal poiſon, communicated or inoculated, ſhould infect animal juices; but that the ſowing theſe ſeeds ſhould produce a diſeaſe, in nature, ſymptoms, and effects, totally diſſimilar to the parent ſtock, is at variance with all analogies, and therefore exceeds all belief.

Concerning the real ætiology of the diſeaſe, I have many years been without any uncertainty in my own opinion. The pox among cows I always ſuppoſed to ariſe from the contagion of their own atmoſphere; a cauſe fully adequate to the effect produced; and this effect ceaſes with the cauſe, or from the influence of ſome caſual and unknown cauſe, and is reproduced indefinitely with the recurrence of the original cauſe. Too ſudden repletion and thickening of the fluids, after the fatigue of long driving, and inanition, is an auxiliary and accelerating cauſe of pox upon the teats, accompanied by low fever, conſiderable debility, and a diminution both of the quantity and quality of the milk. This hypotheſis, I think, will, at leaſt, not be condemned as irrational, when it is conſidered, that the diſeaſe is nearly, or altogether unknown, except in the dairy counties, and in large towns, where the animals, which are its victims, are congregated in ſuch great numbers, and ſtowed ſo cloſe.

The pox of ſwine, called alſo by the London feeders, the *heavings*, appears to ariſe from the above-cited cauſes preciſely, but is attended with much ſeverer effects. I hope I may with truth aſſert, that I have loſt more hogs and pigs by this diſeaſe, than any other man in Britain; by which I would be underſtood, that I ſhould be ſorry to hear of another who had been ſo unlucky in that reſpect. The eruption of puſtules often covers the whole body; the ſymptomatic fever prevails to a very exalted degree, the animal pants violently, and acquires a ſhrill, hollow cry. Thoſe are fatal ſymptoms; but I have obſerved ſome to recover, which retained the ability of coughing ſtrongly; a mean, perhaps, of diſengaging, or rather preventing the lungs from adhering to the *pleura*. Such adheſion was generally obſerved in thoſe which died of the diſeaſe. In the milder ſtages, the proper remedies are, ſeparation, air abroad, dry lodging, brimſtone and madder, equal quantities twice a day, train-oil externally,

nally, warm food. I made repeated trials of emetic tartar, and of crude mercury, in ſeveral bad pig caſes, without any perceptible effects.

To view the cow-pox inoculation in the flattering light, in which a rather extenſive range of experiment has already placed it, is to prognoſticate much benefit to the human race from its benign operations. But thoſe who are aware of the numerous former diſappointments, from hypothetical ſyſtems of phyſics, and preſumed medical ſpecifics, the infallability of theſe laſt too, ſo incontrovertibly proved by a great variety of experimental caſes, will not be unreaſonably ſanguine. They will be for a ſilent and ſober appeal, from the ſucceſs of early experiment, perhaps temporary, and a mere tranſitory deviation of nature from her general rule, to her more known and permanent courſe. By the inoculation of cow-pox, that diſeaſe alone is produced: is it not probable, that the ſeeds of variolous infection are only ſmothered, or their activity ſuſpended, by the ſaturation of the juices with the vaccine virus; and that, after a certain time, and the ceſſation of ſuch cauſe of their ſuſpenſion, ſome other may ariſe, proper to excite them into activity?

The ſingle caſe of Dr. Sims is a very ſtrong one; and it is inconceivable that the patient, in that caſe, having the diſeaſe in ſo violent a manner, ſhould not have had it perfect, and with the ſymptomatic fever, the preſumed condition on which no ſmall-pox is afterwards to take place. Some of the accounts of Dr. Pearſon make the cow-pox a much more ſevere diſeaſe than the inoculated ſmall-pox, and take no notice of the ſymptomatic fever. If thoſe are to be depended upon, the cow-pox has already had its day. That it is often taken in ſo ſlight a way, as to have no preventive effect of the ſmall-pox, I apprehend pretty numerous proofs might be obtained.

But, granting the ultimate failure of this new ſcheme, the public will have no great cauſe of regret, ſince the eſtabliſhed practice of inoculation is ſo ſucceſsful, and in ſo happy a train of even further improvement, from the meritorious labours of learned and experienced phyſiologiſts, both of the continent, and of our own country. That fatal ſcourge of the human race might, in all probability, by judicious and catholic meaſures, be totally extirpated from civilized countries, in no very long period. Even could every family be induced by perſuaſion, to inoculate all their children, whilſt in arms, the diſeaſe would either finally ceaſe, or become ſo mild, as to be unattended with greater riſk than a mere common eruption.

Whatever may be the fate of cow-pox inoculation, it has, and will give further occaſion to a pretty large and open diſcuſſion; which is always beneficial, as having a tendency to produce diſcovery, and promote

mote improvement; and when the public ardour for the prefent topic fhall have become a little cool and fatisfied, I hope it will be turned, by enlightened men, towards another, perhaps of nearly as great confequence, namely, the prevention of the original malady in the animals themfelves. Thofe who have witneffed, or only reflected upon, the exceffive filth and naftinefs, which muft unavoidably mix with the milk, in an infected dairy of cows, and the corrupt and infalubrious ftate of their produce in confequence, will furely join me in that fentiment.

March 14, 1799. J. LAWRENCE.

Cafe of the Cow-pox, communicated by Inoculation to his own Child, by Mr. John Walker, *Engraver.*

(With a coloured Plate, representing the progress of the Pustules through their different Stages.)

HAVING a fon between ten and eleven months old, and the fmall-pox being in my oppofite, as well as my next neighbour's family, I conceived it fo unlikely for my infant to efcape the contagion; and having heard of the benign tendency and mildnefs of the cow-pox, I made it the fubject of particular enquiry; and, from all I could learn, there had never been known an inftance of its proving fatal. On the other hand, I had experienced the fmall-pox in my own family, both natural and inoculated, to terminate mortally. On thefe confiderations, and admitting it fhould not have the defired effect of a preventive againft the fmall-pox, it would ftill leave my child in the fame fituation as others; but, if it really were a prefervative, as it appears in numerous inftances, the advantage would be incalculable, and, if encouraged, might in the end even annihilate that dreadful fcourge of mankind, the fmall-pox.

To encourage others, I tranfmit my obfervations, made in the progrefs of the diforder, accompanied with a drawing, exhibiting the various appearances of the puftules.

On Monday, 19th February, 1799, the infection was given by Dr. Woodville, in the prefence of Dr. Willan, by two incifions, but no material change appeared till the 21ft. when the inflammation was increafed, and a rifing might be felt at each puncture, though not vifible, as given in the plate at No. 1.

On the fourth day, the puftules at the punctures were very diftinct, and the inflammation fpread, as at No. 2.

On

Progress of the Pustules of the Cow Pox in Mr. Walker's Child

Publish'd May 1.1799 by R. Phillips No. 71 St. Pauls Church Yard.

On the sixth day, the pustules had run together, with a small brown scab depressed in the middle, over each incision, surrounded with a thin scale-like edge, too difficult to be represented by the engraver; the pustules were full of a whey-like matter, as at No. 3.

On the seventh day, one of the scabs was accidentally rubbed off, and the pustules became a little browner, as at No. 4.

On the ninth day, it was one irregular pustule; the scabs also became one, with a faint inflamed circle, detached, as No. 5.

On the 2d of March, the eleventh day, that inflammation had entirely disappeared, being united; and the scab had become much darker and enlarged, with the scaly edge before remarked; the circumference of the scab less regular, and almost impossible to be represented by the engraver. A small pustule was observed, quite white, close to the edge of the large one, and which soon so united with it, that it gave its edge more irregularity, as No. 6.

On the thirteenth day, another pustule came out, at a greater distance, transparent, white, and round, as No. 7.

On the fourteenth day, another pustule, similar to the former, appeared on the opposite side of the scab. The former had become more whey-like, and the skin a little brown; and, while making the drawing that day, the pustule which I observed on the thirteenth day, broke, and a clear transparent fluid oozed out, and stood on the pustule, like a drop of dew, in size rather bigger than a common pin's head. I also found the core or hardness, which I had before observed under the sore, was enlarged, and the inflammation much increased, both in colour and extent, as No. 8.

On the seventeenth day, the pustule that came out on the thirteenth, and broke on the fourteenth day, was quite dry and brown; the others which had run into the large one, were now more distinct than at any time before; as each separate scab, of which there were five, although only three pustules were observed, rose above the others, and the whole had quite a polish. The scab of the distinct pustule came off, about ten or eleven days after its first appearance. The core, on the day after its increased size was observed, was equally perceptible in its decrease, and both this and the inflammation gradually abated; the latter becoming rather livid, like a fresh-healed wound when cool. The cuticle all over it seemed about to peel off, being cracked, and the white edges giving somewhat the appearance of whiting, or flower slightly wiped off, as No. 9.

The

The middle, where the first scabs were formed, was dented in, and of a very dark brown colour, almost black, which gradually spread over the whole, and the polish went off, the scab drying, contracted and became dull.

On the 28th of March, the whole scab was separating all round the edges, and the child was inoculated with variolous matter for the common small-pox, which, on this day, (March 21) is evidently dying away, like a simple scratch.

During the whole time, the child never exhibited any particular symptoms of indisposition, and had so little fever, that it was hardly, if at all perceptible; he, however, seemed by the motion of his arm, to be sensible of a soreness under it; but neither that, nor the eruption affected him so much as to render him cross or peevish, although he cut three teeth during the progress of the disorder: he went entirely alone before he was eleven months and a half old.

Rosamond Street, Clerkenwell,
21st March, 1799.

*** *The preceding communication of so interesting a subject, we consider as peculiarly valuable; as Mr.* WALKER *not only shews a mind sufficiently enlightened to give a fair trial to a new method of conquering one of the most dreadful scourges to mankind, but from his professional abilities, also enables us to exhibit the progressive appearances of the cow-pox. We regret, however, that on account of the very late arrival of this paper, the plate alluded to cannot be prepared in time for the present Number, but it will certainly appear in the next.*

As the following communication has been transmitted to us through such respectable channels, and contains an account of a very extraordinary circumstance, we are happy in having an opportunity of laying it before our readers, and wait with impatience for the additional information that is expected from Colonel MARTIN.

INTRODUCTION.

SIR J. SINCLAIR having accidentally heard of the very extraordinary method by which Col. MARTIN, in the service of the East-India Comny, had cured himself of a stone in the bladder, was thence led to request the Colonel would have the goodness to send him an account of the process, which he did accordingly, in a letter, of which the following is a copy,

in the words of the writer. Some apology may be made for the language, Col. Martin being a foreigner. A fuller account is soon expected, which will be communicated to the public when received.

To Sir John Sinclair, *Bart.*

Dear Sir,

I Have been honoured with your very kind favour of the 20th and 22d of December, 1796, as also the one of the 4th of July, 1797. I received them in their proper time, but I have been so much employed, that I had not a proper moment to myself, to answer them as I wished; even now, I cannot do it, being just recovered from a very severe attack of gravel, a circumstance that has not happened to me before, since I have been so fortunate as to cure myself of the stone; which cure was, and must certainly appear very extraordinary, to those who do not know how I accomplished it. I have been looking for a copy of a relation of it, which, I think, I sent to Sir Joseph Banks some time ago, but have not been able to find it. I have only found an old book of memorandums, made during my illness, as I was obliged to make memorandums even of what I was eating and drinking, in order to be able to know what did or did not agree with me. This book is a kind of journal of my disorder, to copy which would be very long; but if Sir Joseph Banks has lost the paper, or the file I sent him, I will make an abstract of the process I used from my memorandums, and also send you one of the files.—I began to file the stone in the bladder, in April, 1782, and as appears by a note I received from Doctor Rennet Murchison, who was at this place as Surgeon to the Resident, I soon made an impression upon the stone, and brought away many small pieces, which are in my possession. One of these pieces I sent to Dr. Murchison for his inspection.

His answer was:—

"Dear Martin, I have examined the Stone with a good microscope; it seems to have a solid shell on the external part, but is internally of a loose texture.—From this appearance, I fancy your mechanical plan has had some effect; but, my dear friend, do not suffer yourself to be so sanguine in yonr hopes, as to use your file too often, for an inflammation of the bladder might now prove fatal; however, as the internal texture of the stone is loose, and as you have broken the hard surface on the outside, I have no doubt but you may get a great deal of it away, by the cautious use of your instrument.

"Your's, affectionately,

June 5, 1782. "R. MURCHISON."

This good man, Dr. Murchison, endeavoured to dissuade me from going on; but as I found daily the good effect of my filing, and never suffered

fered particular pain in doing it; I persevered till the middle of October of the same year, and I think I filed on an average, at the rate of at least three times in the twenty-four hours; I was at first puzzled how to bring the stone to the neck of the bladder; but I contrived to inject warm water into the bladder, which, endeavouring to discharge, it protruded the stone to its neck; I then introduced my file between the flesh and the stone, keeping my body inclined against a wall all the time, till, by a bad stroke, I pushed the stone from the neck of the bladder. In this case I could not proceed with filing, but I was obliged to wait till it came again to obstruct the urine, or it was brought back by injecting warm water into the bladder. Fear of inflammation I had none; for it once happened that a spasm of the whole urethra fixed my file so firmly that I could not move it. This spasm lasted about ten minutes, and when relaxed, a great deal of blood came away, and also many small pieces of the stone. In a couple of days I could renew my filing without any pain, which convinced me that there was no fear of inflammation; and such spasms happened often without any bad consequence. I had long before made use of Mr. DARAN's bougies, not knowing that my disorder was the stone, but thought it to arise from stricture or caruncles at the neck of the bladder. I had also made great use of lime-water and soap, and even injected them into the bladder, when I had found out, that my complaint was the stone in the bladder.

Dr. Murchison had given me for a long time salt of tartar and vitriolic acid; which, I think, did me more hurt than good; as it had once reduced me so very low as to be near dying; and, I think, if I had not quitted that plan, against the advice of all my friends, and of some who are now in England, particularly Mr. NATHANIEL MIDDLETON, of Stafford-Place, London, who advised me to follow that course, I am convinced I should not have lived twenty days. It had reduced me so very much, that I was not able to keep myself on my legs, or even in an erect posture without being giddy. In spite of advice, I took a large dose of tartar emetic, and voided a most corrosive acid from my stomach; from that moment I could sleep, and keep myself on my legs, though reduced to a skeleton. After this, I brought my stomach into better order, and when well, except the pain of the stone, necessity, the mother of all invention, suggested to me the file, which effectually cured me: and I have been extremely well ever since, except about two months ago, I was attacked with a fit of the gravel, of which I am now clear; but the neck of the bladder was excoriated, which prevented me from taking my usual ride, which I otherwise do every day, and gallop about eight or ten miles before breakfast, and the same in the afternoon. Notwithstanding all these exercises, I tend to form so much acid in my stomach, that it would

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give me the gout if I was to omit them. I will by and by send you a better description of the means by which I cured myself, and also send you one of the files.

You may see by my bad English, that I am deficient, perhaps, in expressing myself as I wished, so that I fear the explanation of my cure may not be so clear as if written by one well versed in English. I hope to be excused for any incorrectness in the style, sincerely wishing that my method might relieve others, as it has done me. To every one of the faculty who wished to know what I did, I have explained it. I am convinced that all persons may cure themselves, as it requires very little address. I do not think it possible for another to operate, as none but the patient can know where it pains him, and he will naturally know when and how he can introduce the file, as he cannot do it to any purpose, but when the stone is at or near the neck of the bladder. The file being so very small (not thicker than a straw), is easily introduced between the fleshy part and the stone, and the motion in filing does not extend beyond the length of about half an inch; and when he does it, he naturally will take care not to push the stone into the bladder, as he will for this reason find it necessary to raise the file against the fleshy part, and then push the file in about half an inch, taking care to avoid touching the stone; and and when so far, to draw and press the file upon the stone, two motions that are performed very quickly; and as the file is made or cut in such a manner, as to file only in drawing it, and pressing the file on the stone, he cannot avoid filing that part of the stone; and, by doing it often in the day and night, must at last destroy it, as I did. The pain I suffered from that complaint had made me abandon drinking any liquor but plain water, and I had been so much reduced, having at the same time some ulceration near the neck of the bladder, that I had also been obliged to lay aside the use of salt and spices in my food, to avoid acridity in my urine. My food was nothing else but boiled or roasted meat, and water for my drink, taking care to keep my body open by gentle laxatives. But, as soon as the urine became clear, my stomach began to be better, and I grew more easy, and more regular in filing the stone, which I did very often in the day and night, sometimes ten or twelve times in the day, and passed almost every day small pieces, till the whole came away; and, as I said above, I have been very well since; never had any pain, or return of stone or gravel till very lately. But, from the preceding complaint, my stomach suffered so much, that I am very subject to form acid; and when the acid prevails, it affects my left kidney, and occasions me to make water oftener than usual.

I have lately experienced some attacks of gout, which last about seven or nine days, and a dose of tartar emetic often cures me, with the assist-

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ance of horſe-exerciſe. All fermented liquors, or liquors containing acidity, as alſo fruit, or green vegetables, do not agree with me. Animal food and water are my general food and beverage, and I have always been well during the uſe of them.

I have had the pleaſure to receive the printed paper you have been ſo kind to ſend me. Your labours for the improvement of agriculture are very great, and I am extremely happy to learn your ſucceſs. I ſhould be more happy, if I were able to contribute toward ſo uſeful a branch of ſcience; but I fear nothing can be learned in this country; the ſoil is ſo very rich, that every thing vegetates without labour or art. On theſe accounts, the neceſſity of invention does not exiſt.

Excuſe me, my dear ſir, for ſo long a letter: I at firſt propoſed a ſmall one, in anſwer to yours, but I found the ſubject of my late indiſpoſition has carried me ſo far, to make you better acquainted with the means by which I cured myſelf. Believe me, moſt ſincerely,

My dear Sir, your moſt obedient, &c.

Lucknow, July 9, 1798. COL. MARTIN.

The above letter being communicated to Mr. HASTINGS, by Sir John Sinclair, he returned an anſwer, of which the following is an extract:—

To Sir JOHN SINCLAIR, *Bart.*

Dear Sir, *Daylesford Houſe, Feb.* 28, 1799.

I return you many thanks for the peruſal of Colonel Martin's curious letter; for curious and intereſting it is, even to me, who well remember all the particulars of his caſe, as he has detailed it to you, and even the language in which he has delivered them. The letter from Dr. Murchiſon, a very ſenſible and able practitioner, I well remember. I mentioned the fact once to Mr. Pott, who evidently ſhewed, by his looks and ſilence, that he did not believe it.

I have the honour to be, &c.

WARREN HASTINGS.

An Account of the chief Peculiarities of the Brunonian Syſtem.

AT a time when every Univerſity in Europe and America, and practitioners in both Indies, are directing their attention, by encomiums or criticiſms, to the *Brunonian Syſtem;* when it has begun to be adopted, and openly avowed by many popular writers in this kingdom; it may not be thought unſeaſonable to lay before our younger readers, a concise view of its

its principles and peculiarities. Though dignified by its admirers with the title of a ſyſtem, it will be obvious to the diſcerning reader, that there are many chaſms in it, in common with all other medical ſyſtems; and many errors, the correction of which will require much time and obſervation, if the fundamental principles of it ſhould be admitted.

The circumſtances attending the promulgation of Dr. Brown's opinions, at firſt in Edinburgh, made the profeſſors and eſtabliſhed practitioners unite very generally in oppoſing them. They might have perceived, that the application of his ſyſtem to practice, was by no means ſo ſimple and obvious, as the young ſtudents, who firſt embraced it, imagined; and therefore they might have oppoſed it from an opinion of its dangerous tendency, as well as a diſapprobation of the conduct of its author. This oppoſition, however, in an Univerſity, which, ſince the death of Boerhaave, has dictated the medical opinions of Europe and America, contributed moſt effectually to diſſeminate and eſtabliſh the new doctrines of Brown. The Medical Societies of Edinburgh, inſtituted for the diſcuſſion of theoretical and practical ſubjects connected with medicine, have an almoſt irreſiſtable influence over the opinions of its ſtudents. In order to defend his own diſſertations in theſe ſocieties, or attack thoſe of his contemporaries, every member muſt acquire the ideas and phraſeology which prevail at the time; and that too at a period of life, when all forcible impreſſions remain indelible. It muſt be obſerved, that the members who attend theſe ſocieties, conſiſt almoſt entirely of young ſtudents, and the preſidents are always elected from among them; ſo that their debates are never over-awed by the preſence of profeſſors or eſtabliſhed practitioners. It is well known that the Society, called the Royal Medical Society of Edinburgh, were in the habit of diſcuſſing medical ſubjects, on the principles of the ſpaſmodic, or that ſince called the Cullenian theory, which they had acquired from the works of Hoffman, long before the Profeſſors themſelves had relinquiſhed the opinions of the Boerhaavian ſchool. It is alſo true, that during the latter part of the life of Dr. Cullen, the Brunonian ſyſtem was adopted in all theſe ſocieties, though the graduates of that Univerſity were not allowed to publiſh their theſes upon any other principles than thoſe taught by the Profeſſors. The ſyſtem of Brown, adopted and diſſeminated by at leaſt 200 young men annually, from which number the ſurgeons and phyſicians of the navy and army are generally ſupplied, as well as the practitioners of the Eaſt and Weſt Indies, muſt neceſſarily in eight or ten years affect the opinions of the whole medical world. This was really the caſe; but perſons eſtabliſhed in the profeſſion were ſomewhat ſhy and backward in declaring their opinions, till Darwin profeſſed himſelf to have been a Brunonian, even before he had heard of Brown's ſyſtem.

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The learned were aſhamed to avow the opinions of PARACELSUS, before VAN HELMONT openly adopted them. This reluctance in the human mind, againſt being led by an individual, or being the firſt to join an innovator, appears to ariſe from the unwillingneſs of admitting a dictator, or from the ridicule commonly thrown upon an early apoſtate from eſtabliſhed opinions.

Since the publication of Zoonomia, the language and ſentiments of Brunonianiſm are become common; but what is remarkable, though by no means ſingular, on the occaſion, is, that a majority of the perſons who are become converts to the doctrine, are totally unable to recollect, when or how they were converted.

But it is our buſineſs to give an account of the ſyſtem, rather than of the means which retarded or promoted its promulgation.

The common opinion reſpecting life, or the vital principle in animals and vegetables, is, that it is entirely diſtinct from the organization of the body in which it reſides; that it is a ſeparate, independent principle, added to the body in ſome early period of its exiſtence, and which there continues unchangeable, and then leaves it at a late period, when it finds the habitation no longer tenable. Dr. Brown, on the contrary, conſiders life as an aſſemblage of actions or effects, which take place in the body, in conſequence of a certain prediſpoſition and exciting cauſes; and that the ſtate or quantum of the vital principle, or energy of the ſyſtem, is *perpetually varying*. Thus the abſtraction of heat and food may reduce the powers of life ſo low, that the hot bath, or a glaſs of wine, would be ſufficient to deſtroy the patient. On the other hand, a jail fever, in a few days, may ſo far diminiſh the vital energy, that a warm room, and a bottle of wine a day, may become neceſſary to preſerve life. In the former caſe, the prediſpoſition is ſaid to be morbidly accumulated; in the latter, exhauſted. This ſhort ſtatement includes the baſis of the ſyſtem; but, before we proceed to develope it further, it is neceſſary to explain a few terms, which are peculiar to the doctrine, or employed in a peculiar ſenſe.

The degree or ſtate of action, or vigour of the ſyſtem, or energy of the vital principle, which is preſent at any time, is here called

EXCITEMENT.

It has been ſuggeſted, that Dr. Brown adopted this term, becauſe Dr. Cullen had rendered it faſhionable and familiar to the profeſſion, though he uſed it in a more limited acceptation. We rather ſuppoſe it was preferred on account of its implying here no particular hypotheſis.

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That ſtate of the organization of the ſolids and fluids, which conſtitutes the prediſpoſition to *Excitement*, is denoted by the term

EXCITABILITY.

Some of Dr. Brown's followers, who were of opinion that the *Excitability* of the ſyſtem depended upon the ſtate of the muſcular fibre alone, employed the word *Irritability*, as ſynonymous with *Excitability*. But this is objectionable, as being founded on an opinion not generally received.

All thoſe powers, both internal and external, ſuch as the paſſions, heat, food, medicines, contagion, pain, &c. which, by acting upon the Excitability, produce *Excitement*, are included under the general name of

STIMULI.

This term is perhaps more objectionable than either of the preceding, on account of the enormous extenſion of its application. Stimulants and ſedatives were terms that had long been received as antagoniſts in a medical ſenſe. The annihilating one, and making it only a degree of the other, was a ſhock to medical language too great to be acquieſced in on a ſudden. Yet we know, that in the language of the profeſſion, heat and cold were formerly conſidered as antagoniſts, but now nobody doubts that they are only different degrees of heat.

The ſame error pervades medical language, when ſpeaking of the exciting paſſions; the effects of hope are often imputed to fear, which is only a different degree of hope.

If, for the ſake of avoiding the term *Stimuli*, Dr. Brown had uſed *Exciting Powers*, the abſurdity of exciting powers producing depreſſion, in however low a degree applied, would have appeared more objectionable than the generalization of the term. We ſhall ſoon ſee, that the different *degrees* or *intenſities* of ſtimuli, may often be ſubſtituted for moſt of the different genera and ſpecies of them, as well as thoſe ſuppoſed *antagoniſts*.

Having explained the chief radical terms peculiar to this ſyſtem, we ſhall next proceed to its developement with reſpect to the operation of ſtimuli upon the Excitability, in producing the various degrees of Excitement, upon which all health and diſeaſe are ſaid to depend.

1. The *Excitability* of the whole body, as well as of particular parts, is by Dr. Brown ſuppoſed to be in a ſtate of *perpetual variation*.

This variation depends upon the time and manner of application, of the internal and external ſtimuli employed.

To

To illuſtrate this fundamental poſition, we may inſtance the change which takes place in the progreſs of life, independent of accidental circumſtances. In the firſt days after birth, excitability of the primæ viæ is ſuch, that a few grains of manna will act as an operative doſe. During the firſt year, the healthy excitement of the ſyſtem may be ſupported by a milk diet; and it argues an abuſe of ſtimuli, if a glaſs of wine does not prove an exceſſive ſtimulus before the age of puberty. In advanced life it is well known, that the ſtimuli juſt mentioned, are far too feeble to produce any obvious effect or excitement. If theſe ideas were not founded in truth, there is no obvious reaſon why animals and vegetables might not be immortal.

The accidental circumſtances, which we have juſt alluded to, as moſt commonly producing variations in the excitability, are, the internal and external ſtimuli above mentioned. The changes, however, depend almoſt entirely upon the manner of applying them. It is not the rare or caſual operation of ſtimuli, which produces any permanently important variation in the excitability; but that which, frequently and regularly repeated, changes cuſtom into habit. This may be illuſtrated by referring to the effects of opium, tobacco, ſpirits, &c. upon perſons accuſtomed to the uſe of them. We may alſo advert to the various ſtates of the excitability at the commencement and during the progreſs of fevers; in perſons properly fed and cloathed; and in the ſame perſons, when accidentally deprived of theſe comforts, &c. &c.

2. The degrees, intenſity, or ſum of ſtimuli, which act upon the excitability, and regulate the excitement or energy of the ſyſtem, ought to be conſidered in reſpect both of force and permanency. But, before we can ſpeak of the force or intenſity of the exiſting ſtimuli at any time, it will be neceſſary to obviate the inconſiſtency above alluded to, in calling thoſe things ſtimuli, or exciting powers, which produce ſedative or debilitating effects. If it were poſſible to exhibit any ſubſtance entirely void of heat; or to conceive a total abſence of internal ſtimuli during life; and if we had terms to denote theſe circumſtances, in various degrees of intenſity, which is obviouſly abſurd, and impoſſible, then might we employ the terms "*power of cold*," "*directly debilitating powers*," &c. without outraging the common acceptation of terms. The author of this ſyſtem has been accuſed of a want of preciſion in this reſpect.

No perſon can doubt, that an abſtraction of the cheerful paſſions, of heat, or of neceſſary food, may directly and immediately produce debility. This is the debility ariſing from deficient ſtimuli, and called by Dr. Brown *Direct Debility*. But as this ſtate of the ſyſtem is found to be more ſuſceptible of the operation of ſtimuli than the healthy ſtate, it is inferred that the *excitability*

tability is accumulated; ſo that *direct debility* and *accumulated excitability*, are employed as equivalent terms.

When the energy of the ſyſtem has been diminiſhed, or debility produced, in conſequence of the inordinate application of ſtimuli, as of joy, heat, voluntary motion, wine, opium, &c. this debility, as being *conſequent* to unuſual *excitement*, is called *indirect debility*, or *exhauſted excitability*.

According to this ſyſtem, health, and continued vigorous action of the body, depend upon a due balance or proportion between the ſtimuli and excitability, ſo that the latter may neither accumulate nor be exhauſted for many hours together. It therefore follows, that all diſeaſe ariſes from a morbid accumulation or exhauſtion of the excitability, or from direct or indirect debility. And as two different degrees of excitement cannot poſſibly exiſt in the ſame perſon ſimultaneouſly, it is impoſſible that two different conſtitutional diſeaſes ſhould be preſent at the ſame time.

From this ſhort ſketch of the cauſes of health and diſeaſe, according to this ſyſtem, it will be obvious, that the preſervation of the former, or the cure of the latter, muſt principally depend on due application of ſtimuli.

If time and experience had reduced this to fixed rules, nothing would be wanted to the completion of the Brunonian doctrine. In order to explain this part of the ſubject to the younger claſs of our readers, we ſhall adduce a few inſtances.

If a perſon who had been confined for ſeveral years in a cold and dark dungeon, and fed on bread and water, were committed to our care, or cure, for the ſtate of his ſyſtem could not be that of health, though no ſpecific diſeaſe may be actually preſent; we ſhould not expoſe his eyes to the glare of the ſun, his body to the hot bath, his limbs to fatigue, or his ſtomach to fermented liquors. In the practice to be adopted, all are agreed; but the Brunonian explains it in this manner:—The excitability being accumulated in ſo inordinate a degree, the ſtimuli to be adopted muſt not exceed thoſe uſually applied to a new born child, otherwiſe a fatal inflammation, or ſudden death, would enſue. But if the ſtimuli of light, motion, and food, be applied at firſt in very low degrees, the excitability may be gradually brought down to the common ſtandard; and of courſe become capable of bearing the ſtimuli uſually applied to healthy perſons.

If, on the contrary, we found a patient who had been affected for ſeveral days with jail fever, and reduced to as great a degree of debility as could be compatible with life, the whole profeſſion would agree in the mode of treatment; that is, in applying warmth, or bliſters, externally, and in giving

brandy, wine, ſpices, opium, æther, bark, &c. in appropriate doſes, internally. The Brunonian juſtifies and explains his practice, by ſtating, that the excitability is ſo rapidly and inordinately exhauſted in theſe fevers, that an excitement compatible with the continuance of life, and reſtoration of health, can alone be produced and ſupported by the moſt powerful and diffuſible ſtimuli.

We perceive, then, that the cure of all diſeaſes, according to this ſyſtem, conſiſts in proportioning the ſtimuli to the degree of excitability preſent in the patient, till healthy excitement is reſtored.—As a general rule, we are adviſed to apply the ſtimuli in the inverſe ratio of the excitability, in order to produce the moſt ſalutary action, or excitement of the ſyſtem. Dr. Brown, and his adherents, explain this in the following manner.—They ſuppoſe any ſtate of the excitability, compatible with the continuance of life in the extremes, or with health in the middle of the ſcale, may be repreſented by the common numbers, from 1 to 19; and that the different degrees of ſtimuli which may be applied to it, to reſtore or preſerve health, may alſo be repreſented by the ſame numbers in the inverted order.—Thus,

	Excitability, or Predisposition.		Sum of Stimuli.		Product, or Excitement			
Accumulation.	20	—	0	—	0	death	A	Direct debility.
	19	—	1	—	19	—	B	
	18	—	2	—	36	—	C	
	17	—	3	—	51	—	D	
	16	—	4	—	64	—	E	
	15	—	5	—	75	—	F	
	14	—	6	—	84	—	G	
Health.	13	—	7	—	91	—	H	Limits of health.
	12	—	8	—	96	—	I	
	11	—	9	—	99	—	K	
	10	—	10	—	100	—	L	
	9	—	11	—	99	—	M	
	8	—	12	—	96	—	N	
	7	—	13	—	91	—	O	
Exhauſtion.	6	—	14	—	84	—	P	Indirect debility.
	5	—	15	—	75	—	Q	
	4	—	16	—	64	—	R	
	3	—	17	—	51	—	S	
	2	—	18	—	36	—	T	
	1	—	19	—	19	—	U	
	0	—	20	—	0	death	V	

From

From (A) to (G) includes thoſe diſeaſes which ariſe from the abſtraction of neceſſary ſtimuli, as ſcurvy, petechiæ ſine febre, &c. and points out the degree of ſtimulus neceſſary to reſtore health.

From (H) to (O) includes thoſe variations which may be conſidered as compatible with health, while the correſponding ſtimuli are applied; but if inordinate or diſproportionate ſtimuli be applied, in any ſtate of the excitement, diſeaſe may be induced.

From (P) to (V) comprifes the degrees of exhauſted excitability, or indirect debility, to the account of which almoſt the whole catalogue muſt be placed; for the diſeaſes ariſing from accumulation often ſuddenly paſs into thoſe of exhauſtion, in conſequence of exceſſive ſtimuli.

From the above ſtatement of this ſyſtem, as far as reſpects the cure of diſeaſes, it will be obvious, that the doſes, as well as the medicines themſelves, muſt be regulated by the ſtate of the excitability; and that in aſcertaining this ſtate and proportioning the ſtimuli to it, is the only field in which the practitioner can exerciſe his ſkill and judgment.

For an application of theſe opinions to the prevention or cure of particular diſeaſes, we preſume ſuch of our readers who deem this ſyſtem worthy of their farther attention, will naturally have recourſe to the author of it, in Dr. Beddoes's edition of the "*Elements of Medicine*," 2 vols. 8vo. London, 1795; or to "*A View of the Science of Life*," by Yates and Maclean, 8vo. Calcutta, 1797. In theſe works, the errors and defects of Brown's ſyſtem are pointed out, and corrected or ſupplied.

To the Editor of the Medical and Phyſical Journal.

Gentlemen, *Great Smith Street, Weſtminſter, March* 8, 1799.

As the Medical and Phyſical Journal is intended to be conducted on a broad and impartial baſis, I hope you will inſert in your next number the following obſervations, on a ſubject which I conceive to be of great importance, and which merits the moſt ſerious conſideration of every medical practitioner.

Gentlemen, with the greateſt reſpect,

I am your moſt obedient Servant,

JOHN FRANKS.

In the firſt number of your Journal, we find an article extracted from an eſſay written by Profeſſor Hufeland, of Jena, intitled, "Remarks on the influence of the Brunonian ſyſtem on the practice of medicine."

There

There are Phyſicians in this Country, who entertain the ſame opinion with Profeſſor Hufeland, that Dr. BROWN's work has not a tendency to facilitate the acquiſition of medical knowledge, or to improve the method of curing diſeaſes. On the other hand, there are a very great number of medical practitioners, of great reſpectability, who from their own experience of its utility, have adopted a very different opinion; amongſt theſe are, Dr. BLANE, Dr. ROBERTSON, and Dr. TROTTER.

We find the ſame ſort of unſubſtantial objections now begun to be made to this ſyſtem of medicine abroad, as were made to it ten years ago at home.

To ſatisfy the minds of young men who have not yet commenced their medical career, ſomething more is neceſſary, in order to convince them that this doctrine is not the model they ought to take as their guide, than mere general aſſertions, witticiſms, a reference to the difficulties of applying it in practice, and a contemptuous manner of treating the memory of the Author.

"That animal life is a forced ſtate of exiſtence, is a fact, ſays a Reviewer, which has probably been known ever ſince eating and drinking were in faſhion."—Granted—But has any practical application ever been made of it, we would aſk? Has it not been reſerved for Dr. Brown to make a practical application of this fact, and with the aſſiſtance of a multitude of others, to eſtabliſh a doctrine, which will probably be well received by the lateſt poſterity.

Believing, as I do, the vaſt importance of this doctrine to individuals and to the ſtate, from the great number of lives which have been ſaved this war by an application of its principles, I wiſh to ſee the whole matter fairly preſented to the public, becauſe I think the reſult will be, that the truth of it will be more univerſally acknowledged.

It may be, and no doubt is, in practice ſometimes very difficult to diſtinguiſh a ſthenic diſeaſe from a diſeaſe of the aſthenic claſs; yet if this diviſion of diſeaſes is found to be natural, theſe difficulties ought not to be aſcribed to the doctrine, but to the imperfect ſtate of human knowledge.

But although it may ſometims occur in practice, that from the equivocal nature of ſymptoms we ſhould be deceived; the indications of cure being applied to the caſe, will ſoon point out the error into which we have been precipitated by fallacious appearances, and will be remedied by reverſing the mode of treatment; for it is not to be ſuppoſed, that a prudent practitioner would immediately have recourſe to the moſt powerful means of

removing

removing a diatheſis of an uncertain nature. Thoſe who are thoroughly acquainted with the Brunonian ſyſtem, cannot act ſyſtematically wrong, and this is more perhaps than can be pleaded in behalf of any other ſyſtem. Although on our firſt viſit to a patient, it is true, that we have only to revolve in our minds ſuch queries as theſe: Is this diſeaſe ſthenic or aſthenic? is it univerſal or local? next, what is its degree? yet, we ſhall not, in every caſe, be able to determine theſe queries, ſo eſſentially neceſſary to be known; on the contrary, in many caſes in practice, it will require the greateſt exertion of judgment, to form a right concluſion.

But a right concluſion muſt be formed, or we cannot cure the diſeaſe, and an application of our teſt in theſe caſes, will remove the difficulty, for " the powers that produce one claſs of diſeaſes, are the remedies for the other, and *vice verſa*."

Dr. Brown's ſyſtem of medicine is founded on uncontroverted facts, and philoſophical induction, and not like thoſe ſyſtems which preceded it, on fanciful hypotheſis; therefore, will ſeldom miſlead us in practice. The doctrine in general is plain, ſimple, and eaſy to be comprehended. In it we obſerve only a few general diſtinctions, correſponding to the differences really found to exiſt. In other works of this ſort, we find a great number of diſtinctions made between diſeaſes not eſſentially differing in kind. If we are governed in our practice by ingenious theories which have no foundation in nature, caſes would frequently occur, where, on account of the ſymptoms, contra-indications of cure would be ſuppoſed neceſſary. According to this work, although in many caſes ſecondary or partial conſiderations may preſent themſelves, yet the principal indications in every univerſal diſeaſe are the ſame, namely, to *ſtimulate* or *debilitate*, and to apportion our remedies to the degree of the diſeaſe, and not to ſtimulate on account of certain ſymptoms, and debilitate on account of others, or continue the practice of ſtimulating and debilitating alternately, until the death of the patient puts a period to our endeavours.

Our author has clearly demonſtrated to us the real nature of animal life, has ſhewn that every diſeaſe of the ſyſtem is preceded by pre-diſpoſition; that health, pre-diſpoſition, and general diſeaſe, are ſimilar, and not *oppoſite* ſtates of the body, differing according to the *degree of excitement only*. " The excitement is every thing, ourſelves nothing; for no longer excitement no longer life." Again, " if a juſt degree of excitement could be conſtantly kept up, mankind would enjoy *eternal health*." If a certain degree of excitement is the cauſe of health, it neceſſarily follows, that the application of a leſs or a greater degree of this *effect*, immediately places the

the body either below or above the healthy ſtate; and conſequently, a predispoſition to a diſeaſe of the aſthenic or ſthenic claſſes directly commences, and which will, ſooner or later, terminate in actual diſeaſe, unleſs counteracted by an increaſe or diminution of the excitement. During the period of prediſpoſition, which may be of longer or ſhorter date; for the difference in the degree of the *effect*, compenſates for the difference of time; ſo little diſturbance in the animal economy is noticed, that on the appearance of the ſymptoms of diſeaſe, it would ſeem as if it had ſuddenly invaded the human conſtitution, but which, this doctrine ſhews, is not the caſe. From the increaſe, or diminution, of excitement, a prediſpoſition to diſeaſe is formed, and is gradually, but at the ſame time imperceptibly, increaſing; until, as it may often happen, an occaſional cauſe is applied, which, with the exiſting pre-diſpoſition, induces diſeaſes that have often been aſcribed to a *cauſe* which has not evidently operated ſo as to induce them; the cauſe here alluded to, is *contagion*. On this ſubject it may not be improper, perhaps, to offer a few remarks. A medical friend, who is an able advocate for the Brunonian doctrine, has taken notice of a circumſtance, which appears to demand attention, for at firſt ſight, it appeared to him, rather to militate againſt it.—It is contagion. "I admire the univerſal doctrine of ſtimuli," obſerves this gentleman, "nor do I find it, in the leaſt, vulnerable, except in the conſideration of contagion; in this reſpect, BROWN is unſatisfactory. A reference to the general propoſition is not ſufficient." He then aſks, "What is contagion? a poſitive or negative principle? or does not fever, ariſing from the ſuppoſed introduction of this *unknown* power, rather depend, where there is no other evident remote cauſe, as cold, fear, famine, &c. upon impurity of the air? The air is a ſtimulus abſolutely neceſſary to life; its ſtimulant degree depends upon its purity; any thing diminiſhing *this*, and rendering it not ſufficiently ſtimulating, may give occaſion to every circumſtance of the febrile ſtate; this idea leads me, at once, to diſclaim the notion of a poſitive ſedative, and to embrace the Brunonian opinion, that all diſeaſes of direct debility ariſe from an abſtraction of neceſſary ſtimuli."—I have extracted theſe few lines from a very long letter on the ſubject, to ſhew, that the advocates for the doctrine have not given it a decided preference, without due examination.

The ſcience of medicine has, in many inſtances, been improved by empirics, but this conſideration is not a ſufficient reaſon that we ſhould act empirically on every occaſion, becauſe on a few, we are obliged to content ourſelves with obſerving EFFECTS, without knowing in what manner thoſe effects have been induced. We have long known, that mercury cures the venereal diſeaſe; we were obliged to remain ſatisfied with the

fact.

fact. Now that we know, or are supposed to know, upon what principle it is, that this remedy produces its effects, substitutes that possess a less dangerous tendency are assiduously enquired for.

It is therefore absolutely necessary, that we should be in possession of some system of medicine. If Dr. Brown's system is only in the smallest degree preferable to those which have preceded it, the work deserves attention. It may have defects, but those defects ought to be considered as so many exceptions: and exceptions were never yet considered of such importance as to destroy the propriety of general principles.

The aphorisms of Brown are so intimately connected, originating from known facts, and philosophical induction, that they appear to me likely to stand the test of ages; and I think that had his life been extended a few years, the healing art, before his time so mysterious, conjectural, and contradictory, would have received from his labours still further elucidation.

Diseases admitted as In and Out Patients of the Physicians of the Westminster Hospital, between the 20th of February, and the 20th of March, 1799.*

ACUTE DISEASES.	
Typhus - - -	4
Synochus biliosa - -	1
Phrenitis - - -	1
Pneumonia - - -	2
CHRONIC DISEASES.	
Amenorrhœa - -	6
Anasarca - - -	3
Aphthæ - - -	1
Ascites - - -	2
Asthenia - - -	3
Asthma - - -	2
Catarrh - - -	8
Convulsions - - -	1
Cough - - -	4
Diarrhœa - - -	6
Dyspepsia - - -	7
Enterodynia - - -	3
Epilepsy - - -	1
Erysipelas - - -	4
Gonorrhagia - - -	1
Hæmoptoe - - -	1
Hæmorrhois - - -	2
Hypocondriasis - -	1
Hysteria - - - -	2
Hydrocephalus - -	1
Itch - - - -	5
Ischuria - - -	1
Lepra Græcorum - -	1
Lichen - - -	1
Lumbago - - -	1
Menorrhagia - -	1
Ophthalmia - -	1
Paralysis - - -	4
Pleurisy - - -	1
Podagra - - -	1
Rheumatism - -	7
Scurvy - - -	2
Struma - - -	3
Vomitio - - -	2
Urticaria - - -	1
Worms - - - -	1
PERIODIC DISEASES.	
Quotidian - - -	2
Tertian - - - -	1

Chronic

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* For the Account of Diseases in an Eastern District of London, see p. 215.

Chronic rheumatiſm is, perhaps, a more frequent diſeaſe in this hoſpital than ſome others, on account of the number of people employed in the gardens in the neighbourhood, who have ſeldom an opportunity of changing their clothes when wet.

The caſe of iſchuria above mentioned was of the real kind, and proceeded from a ſcirrhous enlargement of the vagina, preſſing upon the ureters, at their entrance into the bladder. One ureter was enlarged to nearly an inch in diameter, and the pelvis of that kidney to the ſize of an egg.

Liſt of Diſeaſes from the 20th of February to the 20th of March; being the reſult of the public and private Practice of a Phyſician at the Weſt end of the town.

IT is worthy of remark, that notwithſtanding the predominance of inflammatory complaints during the laſt ſix weeks, putrid fevers, and the ſcarlatina anginoſa, in its malignant form, have been very prevalent. The latter, more eſpecially, has proved in many inſtances fatal; and in thoſe who recovered, it produced, after the ceſſation of the fever, anaſarca, ſwelling of the abdomen, ſwelling of the lips and parotid glands, ſtrumous ophthalmia, with an eruption of the favus, and hectical ſymptoms of long duration. The diſeaſe ſpread from London to the adjacent villages, and was almoſt univerſal in Sommers-town, during the month of February.

R. W.

ACUTE DISEASES.

Catarrh - - - -	37
Acute Rheumatiſm -	7
Inflammatory Sore Throat	4
Opthalmia - - -	3
Peripneumony - -	2
Malignant Fever - -	7
Scarlatina Anginoſa -	10
Meaſles - - - -	7
Hooping Cough - -	3
Small-Pox - - -	3
Herpes Zoſter - -	1
Childbed and Milk Fevers	4
Acute Diſeaſes of Infants	11
Tertian - - - -	2

CHRONIC DISEASES.

Cough and Dyſpnœa -	87
Hæmoptoe - - - -	5
Pulmonary Conſumption	12
Chronic Rheumatiſm -	18
Sciatica - - - -	2
Aſthenia - - - -	19
Dropſy - - - -	6
Paralyſis - - - -	6
Apoplexy - - - -	2
Cephalæa and Hemicranium	10
Vertigo and Syncope -	6
Hyſteria - - - -	3
St. Vitus's Dance - -	3
Dyſpepſia - - -	12
Hæmatemeſis - -	1
Gaſtrodynia - - -	7
Enterodynia - - -	5
Diarrhœa - - - -	8
Conſtipatio - - -	2
Scirrhus of the Liver -	1

Jaundice

Jaundice	1	Lichen Pilaris	2
Diabetes	1	Prurigo	3
Gravel and Dyfury	3	Lepra	1
Menorrhagia	5	Purpura	1
Chlorofis and Amenorrhœa	6	Gutta Rofacea	2
Fluor Albus	3	Impetigo	5
Hæmorrhoids	2	Ecthyma	1
Tabes Mefenterica	3	Itch	6
Scrophula	5	Porrigo	8

Practical Remarks on the Difeafes which occurred on board of His Majefty's Ship, Aftrea, on the Jamaica Station, during the Years 1787, 1788, 1789, *and Part of* 1790: *By* STEWART HENDERSON, *formerly a Surgeon in the Royal Navy; now of the Army Hofpital Staff.*

INTRODUCTION.

HAVING been profeffionally employed in various fituations and countries with large fleets and armies, where there was an extenfive field for medical obfervations, I had an opportunity of witneffing difeafe in every fhape, and had often to lament, that the means of relief were fo inadequate, not only from a deficiency of ufeful medicines, but fuch auxiliaries as can alone render the practice of phyfic fuccefsful. However, within thefe few years, great improvements have taken place in the medical department of the navy, (much to the credit of thofe who prefide over that fervice) by a gratuitous fupply of medicines, and every comfort neceffary to preferve and reftore the health of that valuable clafs of men to the ftate—the feamen of the royal navy. The fituation of the furgeons has likewife been improved, and the pofts of honour and emolument multiplied, by the phyficians to the fleets and hofpitals having been *all* taken, this war, from the lift of navy furgeons, which has brought forward men of knowledge and experience, who had before declined ferving; and induced men of abilities to come into the fervice, as their writings, on profeffional fubjects, prove. But what is a better criterion, the fuccefs of their practice in furgery (as well as in phyfic), which the memorable victories gained by the Britifh fleets, gave them an opportunity of fhewing—Thefe circumftances will, no doubt, have due weight with thofe who have it in their power to improve their fituation; fo that the public may reap the full extent of their ftudies and profeffional exertions, which will ultimately promote the welfare of his Majefty's fervice, and contribute to the prefervation of many lives.

But when we look into the medical department of the other service, we find that the sick of the British army (with very few exceptions) in every part of the world, particularly in the West-Indies, on the continent, and at the Cape of Good Hope, have been entirely under the care of men, who never held any employment in his Majesty's service, until they were appointed physicians during this war. In justice, however to those gentlemen, we must allow, they came from a learned respectable body, and might possess profound medical erudition; but it has been fatally experienced, that no course of lectures, no reading, can qualify a man for medical service in hot climates: for medicine being a conjectural art, can only be learned from extensive practice, experience, and observation, in various climates. It must therefore appear obvious to every judicious, impartial, and unprejudiced man, that there was a great impropriety in sending physicians to foreign climates, who had no local knowledge of the countries, or their diseases; and were totally unacquainted with the habits and manners of soldiers; a knowledge essentially necessary to a military physician or surgeon.

From the great attention shewn by his Royal Highness the Commander in Chief, to the arrangement and improvement of every department of the army, there is the best reason to expect, that a grievance no less injurious to the public service, than to individuals, will ere long be remedied. And it is to be hoped from his Royal Highness's consideration to whatever is suggested for the relief of the soldier, the period is not distant, when the sick of the British army will enjoy equal medical advantage with the seamen of the royal navy. No good reason, I imagine, can be assigned why they should not. Policy—humanity, dictates it; and in justice to those army surgeons, who have been many years in his Majesty's service, and have endeavoured to merit preferment, by professional exertions, a diligent and faithful discharge of their duty.

It is evident, from the nature and structure of the human body, and what we know of the laws which govern the animal economy, derangements inducing disease will ever occur from unavoidable causes, in spite of every human exertion; though their danger may be obviated, and some of them, no doubt, entirely prevented, by means which are certainly in our power.

PNEUMONIA.

The first disease which occurred was pneumonia, or inflammation in the lungs, and seemed to be occasioned by the cold, boisterous weather we met with in the channel. The patients complained of violent pains in the thorax, cough, and difficult respiration; pulse frequent, and every symptom of pyrexia. In the beginning, bleeding was made use of, which afforded relief; a purgative was given, and a blister applied to the thorax; the

the ſp. minder. with acet. ſcillit. and ſometimes the vin. antimon. were given, with a view to promote perſpiration and expectoration, which came on about the third or fourth day, and kept up by acidulated and demulcent drinks, ad libitum. In the convaleſcent ſtate, bark and wine, with a nouriſhing diet, were ordered, to recover from the debility, which the evacuations, and copious expectorations had occaſioned. Our coming into the temperate latitudes ſeemed to accelerate the removal of theſe complaints; except in one man, a marine, who, after we left Madeira, informed me, that he was very much troubled with a cough, and ſpitting of matter. Upon examination, it had every appearance of proceeding from an ulcer; his pulſe quick and frequent, and profuſe ſweats in the night; he acknowledged to have been ill a twelvemonth, and had only returned from the hoſpital a few days before he embarked; he being told by the ſurgeon, whoſe care he was under, that he might recover, if he went to a warm climate, which was his motive for not making his illneſs known when he came on board, for fear he would have been returned to quarters. Had he applied to me before we left Madeira, I would have requeſted to have had him left on that iſland, where he would have had every chance of recovery, from the mild temperature of the climate; as his diſorder was far advanced, and the heat of the weather increaſing the debility, I had little hopes of his living to reach Jamaica. To mitigate particular ſymptoms, ſuch as cough, pain, and ſtricture in the thorax, an antimonial anodyne draught was given every night, a bliſter was applied to the pained part, and kept open, with a view to heal the ulcers in the lungs. I attempted it on the principle of ſupporting and reſtoring the general health; the Peruvian bark was given, with ſome preparation of ſteel; rice and ſago for diet, with ſometimes a bit of fowl, and good Madeira wine, humanely allowed from Capt. Rainier's table, and often from the officers' meſs.

On our arrival at Port Royal, he appeared to have gained ſtrength; but, from being much diſturbed by the noiſe on board, I thought it beſt to ſend him to the hoſpital, that he might have the benefit of a milk-diet, reſt, and quietneſs; but he died ſoon after. Upon the whole, from this man's caſe, and many others, which have ſince fallen under my obſervation, I cannot recommend a hot climate for confirmed pulmonary conſumption.

RHEUMATISM.

This diſeaſe, to which ſeamen are particularly ſubject in northern latitudes, when expoſed, after being over-heated, to the ſudden influence of cold, is diſtinguiſhed into the acute or chronic; the latter is often feigned, and not eaſily diſcovered by the moſt diſcerning phyſician. This complaint was the conſequence of the cold moiſt weather, which produced

duced pneumonia. The first patient was of a plethoric and rigid fibre, complained of universal pains, especially in the joints, which were most severe when warm in bed; pulse frequent and hard; thirst increased. Bleeding was freely made use of, which relieved the pain, and abated the febrile symptoms; a purgative was given, and he took one scruple of the pulv. dover. every hour, until a plentiful perspiration came on; it was kept up, and encouraged by drinking balm or sage-tea; by repeating the sudorific, his fever and pains left him, except in one of his knees, which a blister removed.

The other case which occurred was of a chronic nature. The patient chiefly complained of pains affecting the lower joints, without febrile symptoms; he was of a relaxed and debilitated habit. Upon inquiring into his character, I had no reason to suppose that his complaint was not real. I put him on a better diet, with wine, and to take 40 drops of the tinct. guiac. volat. with 20 drops of tinct. opii. twice a day; at the same time, to strengthen the system, and restore the parts to their proper tone, bark and steel were given, and warm stimulating applications to the pained parts. By a continuance of those stimulants and tonics, all his symptoms were removed; perhaps assisted by the warm weather, for he had no return of them, during the rest of the station; a proof that a hot climate is favourable for preventing the attack and recurrence of this disease. Had his complaints not given way to these remedies, I intended to have given him calomel, as an alterative, having found it of great service in several cases of rheumatism, especially when there was reason to suspect a venereal taint in the habit.

REMITTENT, OR MARSH FEVER.

This fever, the legitimate offspring of all hot climates, especially where marshes abound, is the autumnal disease of most parts of Europe, only appearing in a milder degree. It has been described by authors under various names, *bilious*, *yellow*, *Jamaica*, *Senegal*, and in Bengal, *puçka*; but multiplying distinctions which do not exist, only serves to perplex and mislead; for it will be found to be the same individual disease, under different modifications, depending on constitution, season of the year, and local situation. The cause of this fever, in all its varieties, is marsh effluvia; nor can, in my opinion, any other cause produce it. We find that, in some places at the Cape of Good Hope, where no such cause exists, this fever is unknown. We likewise find, that strangers are more liable to be affected by this noxious effluvia, and have the disease in a more formidable degree than the natives of the country, whose constitutions acquire a certain power of resisting it from habitual exposure: at the same time, its effects on them are obvious, by shorten-

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ing the duration of life. I do not think that the original diſeaſe produced by this miaſma is infectious, but that it may alter its type, and become highly contagious from concurrent cauſes; as from too many diſeaſed bodies being crouded together, without paying ſufficient attention to ventilation and cleanlineſs. This appears to have been the caſe in the Britiſh hoſpitals, in every part of the world, and occaſioned the great mortality which has prevailed in the army, particularly in the Weſt Indies, and on the Continent. When a man was ſent into theſe hoſpitals, however ſlight his complaint, it degenerated, in a very few days, into the moſt malignant fever; and, as Dr. Sinnot very juſtly remarks, there was leſs danger in entering into the field of battle than attending our ſick in the general hoſpitals. This noxious exhalation enters the ſyſtem, either by the lungs, ſkin, or ſtomach; but the manner in which it produces thoſe ſymptoms of diſeaſe, which characterize the fever, does not appear to be well underſtood. We can only perceive its general effects on the ſyſtem; and that it may lurk for a certain time in the habit, before morbid movements take place. Several inſtances of this occurred when I was laſt at Jamaica. His Majeſty's ſloop of war, Alert, went up to Rock Fort to water, and anchored cloſe to the ſhore, when the atmoſphere was charged with marſhy exhalations; her crew were then in perfect health. She immediately went to ſea, and fourteen days after, the greateſt part of the men were attacked with the remittent fever, and it was obſerved, that the men who had moſt acceſs to the ſhore, were the firſt ſeized with the complaint. The ſubjects on whom this fever exerts its greateſt violence, are of two different temperaments; firſt, the young and plethoric, and thoſe of a rigid, irritable fibre, and great excitability, have every thing to fear from expoſure to the action of this poiſon, eſpecially when the body has been overheated, either by the uſe of ſtimulating liquors, or by violent exerciſe in the ſun; ſecondly, thoſe who are under the impreſſion of fear or diſappointment, and are conſtitutionally deficient in energy of mind and body, who may be ſaid to be conſiderably under the ſtandard of health, and eaſily affected by every debilitating power.

As this exhalation is found to exert its influence to a conſiderable diſtance, notwithſtanding every precaution to prevent it, thirty of our men felt its effects on board of ſhip. The patients of the firſt claſs were young men (chiefly marines) of athletic habit, who had never been in a hot climate. They complained of nauſea, ſickneſs, violent pain in the head, particularly in the fore-part, and ſtrong pulſation of the temporal and carotid arteries; the eyes became red and turgid, with evident determination of the blood to the brain. The lungs and ſtomach appeared to be in a ſtate of inflammation, and great irritability: the latter rejecting every thing taken into it; the

tongue

tongue white; ſkin dry; the pulſe quick and full. From the violence and rapidity of the ſymptoms affecting organs of primary importance, I conſidered it neceſſary that ſomething deciſive ought immediately to be done, before the morbid movements had made too great progreſs. With a view to relieve inflammatory ſymptoms, and prevent the brain being oppreſſed, bleeding was freely reſorted to, and not by any determined quantity, but until the ſymptoms ſubſided, which was manifeſt from the pulſe becoming ſoft and regular. Cool air was freely admitted, and cold applications to the head were directed to be uſed; after bleeding, a large bliſter was applied to the region of the ſtomach, which removed the pain and irritation of that organ. Calomel with James's powder were adminiſtered to procure ſtools, and promote perſpiration; this was encouraged by drinking, *ad libitum*, of balm or ſage tea. In the convaleſcent ſtate, bark, wine, and a nouriſhing diet, were had recourſe to, which removed the debility brought on by the violence of the ſymptoms, as well as that occaſioned by the neceſſary evacuations.

The ſecond claſs were men of a lax fibre, and diminiſhed energy of mind and body, with a conſiderable degree of nervous irritability, and but little vaſcular excitement. The effects of the virus upon theſe, were giddineſs, ſickneſs, and diſagreeable ſenſation at the ſtomach, attended with frequent vomiting of a ropy matter; the head much affected; the pulſe quick, irregular, ſometimes tenſe; the countenance deſponding; the ſkin dry; the tongue white; the belly torpid; the ſecretion of bile diminiſhed; the urine ſcanty and limpid. As there was no inflammatory diſpoſition inducing dangerous determinations of the blood, bleeding was not employed; although there was nauſea and ſickneſs. Antimonial emetics were not uſed, having always obſerved that they increaſed the irritability of the ſtomach, which is the moſt troubleſome ſymptom attending this form of the fever; a bliſter ſometimes had the beſt effect, when applied to the region of the ſtomach, and, in ſome caſes, over the whole of the head. Camomile tea, and the effervеſcing draughts were given, with a view to relieve the nauſea, and vomiting: to promote perſpiration, James's powder, with camphor, were adminiſtered every hour, until the effect was produced. The bowels were opened by rhubarb and calomel; to ſupport and increaſe the energy of the ſyſtem, bark and wine were adminiſtered, as ſoon as the ſtomach had the power of retaining them, and continued with a nouriſhing diet, until health was perfectly reſtored.

There is another form in which this poiſon acts on ſubjects partaking neither of the violent inflammatory ſymptoms of the firſt, nor the diminiſhed energy or nervous affection of the ſecond. Men, who may be ſaid to be neither above nor below the common ſtandard of health, are able ſometimes

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to overcome the influence of this noxious vapour; but, when the habit was not vigorous enough to resist it, they were generally seized with cold shivering, succeeded by great heat, sickness, and sometimes a vomiting of bile; the tongue white and furred; the pulse quick and full; thirst great; urine high coloured; although there were marks of irritation and inflammatory diathesis in the beginning, but yet not sufficient to justify blood-letting; which, I considered, would have diminished the vital power, and reduced the patient to the same state as described in the second form. I therefore thought it more adviseable to employ mercurial purgatives, which had a very good effect in carrying off the bilious sordes collected in the first passages, and supporting, in a great degree, the febrile phenomena;—Emetics were sometimes given; James's powder, with camphor, to promote perspiration, and effect a complete remission. After the bowels were emptied, and the sudorific process completed, the bark was immediately given, and continued day and night, which generally checked the progress of the disease. Wine, and a nourishing diet, in the convalescent state, were always allowed. In concluding these few remarks on the varieties of the endemic fever, I must observe, that the first form of the disease appears only in subjects newly arrived from Europe, the young and plethoric; for a residence in a hot climate, and other debilitating causes, remove that rigidity of fibre, and density of the fluids, which co-operated at first in producing those violent derangements. Men of this description should therefore, before their arrival, undergo some preparation to reduce their habits; while those of the second class, ought to resort to means which may give a certain degree of strength and energy to the system. They will then have the disease in a milder degree, such as it appears in those subjects attacked with the third form of the disorder.

(To be continued in our next Number.)

An Account of a Species of Cantharis, found in Buck's County, Pennsylvania; including Observations on its Medical Properties. By Dr. Isaac Chapman.

THIS insect has a very near resemblance, in its external form, to the *meloë vesicatorius, alatus viridissimus, nitens, antennis nigris. Linn.* — or Spanish flies, as they are commonly called, but is rather smaller than those brought from Spain, and of a different colour; the head is of a very light red, with black antennæ, the elytra, or wing cases, are black, margined with pale yellow, and a stripe of the same colour extends along the middle; the

the tarſi have five articulations; the mouth is armed with jaws, and furniſhed with palpi.

Obſerving them plentiful in my garden, I caught as many as weighed about an ounce when dried. ISAAC PRAUL, one of the young gentlemen ſtudying medicine with me, powdered five or ſix of them, and laid the powder on a plaſter, which he applied to his ancle, and in eight or nine hours, they produced a very good bliſter.

(Dr. Chapman then enumerates three caſes where he applied theſe flies, in all of which, they drew good bliſters:—he thus proceeds)—

I have ſince uſed theſe cantharides in near one hundred caſes, as veſicatories, and, in every trial, I found their qualities equal, and rather ſuperior to thoſe of European cantharides; they appeared to have fully as much effect in relieving the ſymptoms, and removing the diſeaſes for which they were applied; and their effect on the ſyſtem was the ſame, having, in ſeveral caſes, produced a ſlight ſtrangury; the diſeaſes in which I uſed them were various, as fevers, pleuriſy, nervous diſorders, &c.

From ſeveral experiments *(which Dr. Chapman recites)* it appears that every part of the inſect is endowed with an equal, or nearly an equal degree of their quality; they likewiſe ſhew their great power, as about one quarter of a grain was ſufficient to produce a good bliſter as large as a ſhilling.

(Then follows the manner of gathering and drying the inſects, which, as it is chiefly intereſting to the inhabitants of America, we here omit.)

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IN an article of your firſt Number, in which the author is pleaſed to ſpeak of me in relation to MAYOW, he confounds the two SCHERERS—one of whom wrote againſt Dr. FERRO, on the Uſe of Vital Air; and alſo publiſhed an Analyſis of Mayow; while the other, the chemiſt of Jena, propoſed to tranſlate my Abridgement. (ſee the *Annales de Chimie*) but now intends to tranſlate Mayow, and to add an Appendix*. The former is uſually called Scherer of Vienna. Whether this Scherer, or myſelf, firſt drew notice towards Mayow, is a queſtion of total indifference to me.

THOMAS BEDDOES.

Clifton, March, 1799.

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* *For a more particular account, on this ſubject, we muſt refer the Reader to the article,* "MEDICAL AND PHYSICAL INTELLIGENCE," *in this Number, page 204.*

On the Application of Pneumatic Chemiſtry to the Cure of Diſeaſes:—By Citizen FOURCROY.

THIS memoir, which we announced in our laſt, is only an introduction to what the learned author intends to publiſh ſeparately, from time to time, on all parts of the animal economy, on which modern chemiſtry has begun to throw any light; with a deſign to point out what is known of that branch of phyſics, hitherto ſo little advanced, as well as that with which ſome men only pretend to be intimately acquainted; to ſhew what we may hope to learn from experience, and thus, at once, to encourage the labours of other ſcientific men; to cultivate a field, promiſing ſo proſperous a harveſt, and to confound thoſe enemies, who attack the ſyſtem with their diſcordant clamours.

The general reſult which Citizen FOURCROY has always inſiſted upon, is this—that in the new method of operating and reaſoning, adopted by chemiſts, there are contained a very precious and valuable means. Hence it has been already diſcovered, that the blood is heated in reſpiration; that it loſes the carbon and hydrogen; that it abſorbs the oxygen; that it conſequently is renewed, and acquires that quality by which it ſtimulates the heart; that it every where generates heat and life, and changes its nature through the circulation, &c. It has produced a number of other diſcoveries reſpecting reſpiration; the formation of the bile; the nature of albuminous, gelatinous, and fibrous humours. It promiſes greatly to aſſiſt the phyſiologiſt in the ſtudy of the nature and the functions of animals; but, for this purpoſe, an ardent continuance of reſearch is indiſpenſable; as, what has already been diſcovered, is but a ſmall part of what is neceſſary to form a general theory of *animalization*, and the phenomena of the animal economy.

This method is alſo applicable in the knowledge of diſeaſes; but here ſtill leſs has been done than in the former part, and it will be impoſſible to form a doctrine of pathology, until the termination, or at leaſt, a conſiderable progreſs has been made in a work which has yet been ſcarcely begun. One of the objects of theſe applications, which ſeems fartheſt advanced, at leaſt as appears by the noiſe it has lately made among medical men and philoſophers, and the diſcuſſion it has received, in all the ſocieties employed in medical reſearch and ſtudy, is that which regards the *medical properties of* OXYGEN; a word (ſays Citizen Fourcroy), the very name of which will draw upon me numerous groups of men, animated by different opinions and paſſions, but alike enemies to this ſyſtem.

To oppoſe theſe formidable bodies of antagoniſts, Citizen Fourcroy

 proceeds

proceeds to ſhew the progreſs of the pneumatic doctrines, from the year 1779 and 1780, ſtating the principles on which it is founded, and the ſtrong arguments in its favour. For this detail, we refer the reader to the memoire itſelf, containing 55 pages, 8vo. and ſhall content ourſelves with the following extract:—

"A remarkable epoch in the annals of hiſtory, that of the war of French liberty, furniſhed me with frequent opportunities of making a uſeful application of my ideas of the healing powers of oxygen. In that war, ſo terrible at home, and at the ſame time ſo glorious for the Republic abroad, a concurrence of circumſtances rendered mercury very ſcarce. The advice which I then gave to Government, as to the poſſibility of ſubſtituting ſeveral oxygenated ſubſtances for mercurial preparations, in the treatment of venereal and pſoric patients, who required a great quantity of theſe preparations, in the military hoſpitals, not having been followed; becauſe the ſuperintending officers of health in the hoſpitals doubted the efficacy of the experiments I propoſed, while their confidence in mercurial remedies was founded on long experience, I determined to publiſh my opinions, and to explain my ideas in my public lectures; confident that they would gradually take root in the minds of the pupils, and would there find that reception and attention, which alone could make them productive of thoſe uſeful effects of which I thought them ſuſceptible. In the fourth year of the Republic, therefore, both in the ſchool of medicine, and the muſeum of natural hiſtory, I inſiſted more ſtrongly on this doctrine, and the benefits likely to reſult from it in the healing art, than I had hitherto done. I particularly adopted, as the ſubject of diſcuſſion, the citric ointment, of which, I knew, there was a great conſumption for patients in the itch. I demonſtrated, that the oxygenation of fat, by the oxyde of mercury, and the acid of nitre, was to be conſidered as the principal cauſe of its virtues, and that it might perhaps be poſſible, altogether, to diſpenſe with mercury in that preparation; that the nitric acid alone appeared to reduce the fat to that ſtate of oxydation, where it acquired its well-known medical properties, and there was every reaſon to think, that in this ſtate, it poſſeſſed, without mercury, every property of the citric ointment. Citizen Alyon, who was preſent at this lecture, immediately entered into my ideas, and informed me, that he was determined to make the experiment, in order to aſcertain the oxygenating effect of the nitric acid upon fat, and to ſatisfy himſelf of the properties which it acquired. Theſe firſt experiments, made with the good ſenſe and prudence of which I knew him poſſeſſed, were ſucceſsful beyond his expectations.—He proved, that the oxygenated fat was antipſoric, and antiſyphilitic. He added the uſe of the nitric acid, employed with the ſame view by ſome Engliſh phyſicians, after their countrymen,

tryman, Smyth,* who had firſt made the diſcovery in the Eaſt-Indies. The ſucceſs of this combined method of applying it, externally and internally, was not afterwards diminiſhed, and the report of the commiſſion which had been directed by the ſchool of medicine, to proſecute the new experiments, will beſt evince, how far the firſt ideas which I had given were improved by the attention, the abilities, and the perſeverance of Citizen Alyon, who had a number of obſtacles to encounter.

"In the mean time, while my efforts began to produce ſome fruits in France, philoſophers of other countries, far from being idle contemplators of theſe new ideas, adopted and received them with greater eagerneſs than the French phyſicians. If ſome of theſe carried the pretenſions of the modern chemical doctrines too far; if one, for example, already endeavoured to explain by this all the phenomena of the animal economy; if another ſaw in it the means of prolonging life; the greater number, leaving theſe dangerous paths, followed the more certain road of experience. Three phyſicians have already diſtinguiſhed themſelves in the career, which I congratulate myſelf I have opened, although ſome of them have not, on this head, done me the juſtice which I had a right to expect. M. Von Humboldt, of Berlin, ingeniouſly combined the new facts of Galvaniſm with the efficacy of chemical agents on the organs of living animals, and thus clearly explained the phenomena of the functions of vegetables and animals. Dr. Beddoes, an Engliſh phyſician, examined and carefully determined the action of ſeveral elaſtic fluids in diſeaſes. Dr. Rollo and Mr. Cruickshank, of the ſame country, in ſtudying the ſymptoms of a diſorder almoſt unknown here, and yet more common than is generally believed, *diabetes mellitus*, collected for the better inveſtigating its nature and cauſes, all that the new chemical diſcoveries offered, and was applicable to that ſubject. They obſerved in that diſeaſe a primary affection of the ſtomach, where vegetable food, by a particular attraction, acquired a ſaccharine quality, which was communicated more or leſs rapidly to the urine; produced a ſur-oxygenated ſtate of the whole ſyſtem; and confirmed that ingenious theory, by the ſucceſs of the remedies they employed. Their work, too little known in France, but with which Citizen Alyon propoſes to enrich the French ſchool, is one of the ſcientific monuments which will beſt prove what advantages medicine may derive from chemiſtry.

"Thus the improvement which I have announced, has made ſuch an impreſſion, that there is no further fear of its being checked in its growth. The only obſtacle which can occur to its progreſs, is, that medical revolutionary ſpirit, which may indiſcreetly accelerate it; a dangerous precipitation

* We preſume inſtead of Smyth, it ought to be Scott.

tation of which there already appear too ſtrong ſymptoms in the learned world. That chemical doctrine, the moderate and prudent application of which may renew our knowledge of the animal economy, ſeems already to miſlead minds, in other reſpects enlightened and ingenious. They wiſh to rear an edifice without having collected the materials. It is undoubtedly known, that the animal ſyſtem, in which oxygen is a great agent, may, either through deficiency or exceſs of that vivifying principle, be impaired; that it is at once the primary ſource of heat, irritability, and the vital motion; that its uſe, either externally or internally, in particular diſeaſes, excites in general the action of life; that we ought to admit two claſſes of remedies in this conſideration, the oxygenating and deſoxygenating; that the former increaſe the activity of the whole ſyſtem, heat, circulation, force, and motion; that the latter, on the contrary, diminiſh all theſe natural effects; that frequently, in the evident empiriciſm of good practitioners, which ſupplies the place of certain principles hitherto wanting in the healing art, the medicines which they preſcribe act by one or other of theſe powers, oxygenating or deſoxygenating. But, if ſuch fundamental aſſertions may be reckoned among the number of thoſe truths, which medicine owes to modern French chemiſtry; if that ſalutary art can already promiſe itſelf important aſſiſtance and more certain lights than we had formerly, how many particulars muſt we yet explain; how many important problems remain yet to be ſolved in chemiſtry; how many ſolutions muſt we attend to, before we can abandon the path hitherto followed, and look upon all the ancient foundations as errors and chimeras? We are yet far from poſſeſſing the requiſite data, and that collection of truths neceſſary to form a complete doctrine, a new medical ſyſtem! Scarcely do we know ſome of the phenomena of certain functions in the animal economy; ſcarcely have we made any fortunate applications of the modern pneumatic diſcoveries; and already we begin to draw from thence general inductions on the nature and cauſes of diſeaſes; ſcarcely have we ſketched the analyſis of ſome of the principal humours in a ſtate of health, and already pretend to claſs diſeaſes after the chemical changes of liquids, and to form a humoral noſology. We ſpeak of claſſing diſeaſes according to the exceſs or deficieney of azote, oxygen, or carbon, before the proportion of the principal conſtituents in any particular animal ſubſtance is aſcertained. What *may be*, is confounded with what *is*; mere appearances, given only as ſuch by authors, are laid down as demonſtrated truths. Perſons of ſuch ſanguine ideas, eager to form theories, as general and fleeting as their fancies; will, it is to be feared, by too precipitate an application, and hypothetical reſults, very eſſentially injure a ſcience, which they have not ſufficiently cultivated to employ it with diſcretion and advantage."

On

On the Connection subsisting between the Gout and Hypochondriasis in Men, and the Gout and Hysteria in Women: By Professor Tode, of Copenhagen.

(Extracted from the Journal of Inventions, Theories, and Controversies in Medical and Natural Philosophy, Gotha, 1798.)

According to the opinion of the celebrated Prof. Tode, of Copenhagen, " hypochondriasis is merely an imperfect podagra residing in the stomach and bowels, whereas its natural and proper situation is in the great toe." This idea, though not a little eccentric, and even whimsical at first view, the ingenious author supports with many plausible arguments. In a small work which he has lately published, intitled: " *Necessary instructions for hypochondriacs who wish to become acquainted with their real situation, and guard themselves against danger*; 8vo. Copenhagen, 1797." (in German) the Professor reasons chiefly upon the following facts, 1. That a similar bodily constitution renders persons equally disposed to hypochondriasis, as it does to the gout; 2. That hypochondriacal symptoms frequently alternate with attacks of the podagra, and that immediately on the perception of the latter, the former cease and disappear. Upon the strength of these two facts, Dr. Tode is anxious to establish the identity of what are commonly considered separate, the hypochondriasis and the podagra. With due deference to this learned writer, however, we cannot assent to this doctrine; for the following reasons. 1. With respect to the alleged similarity of bodily constitutions, subject to the attacks of the hypochondriasis and podagra; this analogy either proves too much, namely, the identity of all diseases to which persons of a robust constitution * are subject; or too little, as it is well known, that *real* hypochondriacs are far from possessing a sound healthy constitution. And although we were to admit the alteration between the attacks of the hypochondriasis and those of the podagra, this would not establish the identity of the two diseases. It is a fact generally admitted by medical practitioners, that one distemper may remove or suppress the other, in a variety of ways, without any identity subsisting between the two, and without any change or translation of a morbid matter from the place of the first to that of the second disorder. The gout, therefore, may probably silence the complaints and sufferings of the hypochondriac, by a sort of counter-revolution effected in the body. Thus, it has been observed, that after the expiration of cutaneous tumours, the gout or consumption followed; but can it on that account be justly inferred, that a cutaneous tumour is virtually nothing but a concealed gout or

* According to Prof. Tode, persons afflicted with gouty and hypochondriacal diseases generally possess a sound constitution.

or conſumption, limited to a certain part of the body? Thus, alſo, after eruptions or ulcers had been healed, the patient frequently became ſubject to epileptic fits; but can we, with any propriety, call ſuch eruptions and ulcers, a cutaneous epilepſy? This, indeed, could not be conſiſtently aſſerted; neither can the poſition of Mr. Tode be maintained, that the hypochondriaſis is virtually the ſame thing with the gout in the ſtomach and bowels.

Much truth, however, is concealed in this unlimited doctrine of the Profeſſor. The whole miſconception in the propoſed theory ariſes from the author's confounding *pure hypochondriaſis* with a defective digeſtion, or *dyſpepſia,* which is eſſentially connected with the arthritic diſeaſe, and which always, ſooner or later, precedes the ſymptoms of the gout. This ſpecies of dyſpepſia has been accurately deſcribed by TRAMPEL, in his "*Obſervations and Experiments*; two volumes, 8vo. 1788 and 1789. Lemgo:" (in German): and the partizans of the *Brunonian Syſtem* have very lately, though with much exultation and pretenſion to novelty, excited the attention of medical practitioners to that latent enemy of the gouty and hypochondriacal. This dyſpepſia ſhould be ſubſtituted for the hypochondriaſis, in all caſes where Mr. Tode ſpeaks of its cure and connection with the gout. With reſpect to the *pure* hypochondriaſis, we may ſafely appeal to the judgment of experienced medical men, that it is by no means neceſſarily connected with the podagra, and that real hypochondriacs are leaſt ſubject to the gout: on the contrary, this latter phenomenon is ſeldom, if ever, obſerved by practitioners. It muſt, however, be admitted, that even the dyſpepſia, as combined with the podagra, is very frequently a troubleſome and torturing malady, and that it may be eaſily confounded with the hypochondriaſis; particularly in times and countries, where it is not unfaſhionable to complain of hypochondriaſis, and where only a ſmall portion of *ennui*, diſcontent, ill humour, or a corrupted ſtomach, may ſuffice to procure a perſon the reputation of a complete hypochondriac.

Although Dr. Tode's pathology is inaccurate, with regard to *pure* hypochondriacs, yet the diet and regimen he preſcribes will in general be found ſalutary; the medicines, however, which he recommends for the cure of the diſeaſe, are not only inadequate, but they are likewiſe too inert, and do not correſpond with the leading indications to be attended to in the hypochondriaſis. Whoever has had the treatment of patients of this deſcription intruſted to his care, in whoſe ſtomachs there is a continual diſpoſition to acidity, will neither hope nor expect to vanquiſh ſuch a diſtemper, by adminiſtering a little magneſia and quaſſia, as Mr. Tode adviſes in his treatiſe. It is not however our intention to enlarge, in this place, upon the treatment

of

the true hypochondriasis, but only to remark, that the author has not accurately distinguished this disorder, which he appears to have confounded with dyspepsia, the inseparable companion of the gouty.

To afford the reader an opportunity of judging how far the *method of cure* prescribed by the Professor coincides with his theoretical notions, we shall here insert, from the practical part of his essay, a few particulars relative to the medical and dietetical treatment of hypochondriacs.

"A patient, afflicted with hypochondriasis, ought not to imagine that medicine will afford him much relief, or that nature requires chiefly artificial aid; he may, however, expect more benefit from a proper attention to diet, than from dabbling in physic. It is an ill-founded conceit, that the numerous and diversified symptoms of this disease require a tedious, artificial, and compound method of cure; on the contrary, as all these symptoms originate from the same source, a few appropriate medicines are sufficient to answer the purpose of checking and suppressing them.

"I advise only one general method of curing this disease, which is usually effectual in all its stages, and in all its symptoms; as being well calculated to remove the predisposing cause of the disorder.—From whatever cause hypochondriasis may arise, whether from nervous debility, or from a concealed podagra, it always depends on two different deviations from a state of health, namely, first, *weakness* of the stomach, or the intestines, as well as the other parts of the body; and secondly, on an *acid* in the stomach.

"Weakness requires strengthening remedies, and for this purpose the quassia is one of the most proper: acidity must be absorbed, and to accomplish this, the white magnesia is fully adequate.

"A third indication of cure sometimes claims the attention of the practitioner, viz. to remove *spasms*, which frequently occur in hypochondriac patients, although they are, in general, known only from their effects. These require the use of one remedy only, namely, what is vulgarly called the nervous tincture *(liquor nervinus)*, being a solution of camphor in Hoffman's anodyne liquor, which consists of ambergris dissolved in a spirit distilled over roses, so that the patient take from half a grain to a grain of camphor for a dose, frequently repeated. This powerful remedy ought, however, to be used only when the two preceding medicines have proved inefficacious, and after the first passages have been duly evacuated of acrimonious and acid humours, or at least a proper regard paid to this important circumstance."

With respect to *diet*, both as to the articles of food and drink, which are the most proper for hypochondriacs, Mr. Tode suggests many valuable hints,

hints. These occupy his 16th and 17th Chapters, which extend to upwards of twenty pages, and of which, for want of room, we shall give the reader only a summary account.

The author justly deprecates the use of all acid and acidulated food and drink in this tedious disorder. Of the vegetable articles, he recommends particularly, the sweet red turnip, or beet root, carrots, cauliflower, French beans, green peas while young and tender, mealy potatoes well boiled, lettuce, or other sallad, without oil, vinegar, or eggs, sweet French prunes, rice boiled in water, &c. On the contrary, he strongly dissuades hypochondriacs from the use of onions and garlick, as well as all other heating spices, cabbage (even *sour-kraut*), the favourite dish of the Germans, which agrees only with those who are not troubled with acidity,) all decoctions of oats and barely, as well as porridge, hasty puddings, dishes made of meal, as pastry, confectionary articles, and every kind of milk and cheese.—Among the different species of animal food, he considers beef, mutton, light game, and fresh fish, as wholesome to hypochondriacs, but condemns veal and lamb, particularly, when very young and tender, as being unwholesome: beef or veal a-la-mode, is, according to him, extremely pernicious, on account of the quantity of spice employed in the cooking of these dishes, which is but too frequently used for the purpose of covering or palliating a bad taste, arising from the putrefaction already commenced in such meat as is employed by public cooks; dishes, which the late celebrated Dr. ZIMMERMAN emphatically said, were of *infernal cookery*. Our author further inculcates the necessity of abstaining from smoked and dried fish, eels, sprats, salmon, crabs, lobsters, and herrings; the last of which, however, may be eaten salted, with moderation, if not too fat.

In the article of beverage, he prefers claret-wine to all others; of the sweet wines, Madeira is the most conducive to the health of hypochondriac and nervous patients; but Rhenish wine and Champaigne are hurtful, on account of the great quantity of fixed air they evolve in the bowels.—Beer is more or less objectionable, according to its strength and imperfect fermentation: he recommends therefore a weak beer, somewhat bitter, and well fermented, which is a refreshing and excellent beverage to quench thirst. All sorts of ardent spirits are highly pernicious, while tea, coffee, and chocolate are hurtful only when used immoderately, that is, either too hot, or too strong; Bohea tea is, in his opinion, the most wholesome.

With respect to dress and exercise, he gives several useful precepts, and concludes this interesting and popular treatise with the following remarkable declaration: " I have here advanced no other proposition, than such as are principally confirmed by my own experience, and of the truth

truth of which I am fully convinced. I have not published these sheets as a Doctor and Professor of medicine, but as a convalescent from hypochondriasis, and for the benefit of my fellow-sufferers, as well as the *candidates for the gout*. If they are useful to the public, I shall, without reluctance, forfeit the approbation of my learned colleagues."

Without wishing to detract from the merit of originality, equally due perhaps to Mr. Tode, as well as others, we shall in this respect observe, that about twenty years ago, Dr. Weikard, of Heilbron (one of the most zealous apostles Dr. Brown has found in Germany), maintained, "that the morbid matter of the gout is the *proximate cause* of the hypochondriasis and hysteria;" see his '*Miscellaneous Medical Writings*, No. I. *Frankfort*, 1788, 8vo. p. 117.' Dr. W. upon this occasion, asserted, that "if our nerves have, from a variety of causes, been debilitated and rendered more irritable, it is then probable, that some specific matter of gout, scattered through the body, and not yet fixed to any particular part (in other places the author calls it *crude* or *immature* matter), produces irregular motions in the nervous system, in consequence of which we are afflicted with a nervous disease (hypochondriasis, hysteria); whereas our ancestors, as is still sometimes observed among country people, after an irregular mode of living, were punished with the gout."

To gratify those readers who are anxious to restore to every author his due, we shall here insert a passage from the writings of the ingenious Stahl, who was well acquainted with the alternation *now* supposed to take place between the hypochondriac and arthritic affections. That great man expresses his sentiments on this head in the following words: "Inveni utique per hos 24 annos, imo certe amplius, curiose inquirendo in *reciprocas conspirationes* arthritico-podagrico hæmorrhorum affectuum non solum tantum numerum, sed quod præcipuum est, tantam constantiam et universalem quasi veritatem harum rerum, ut hinc merito occasionem sumserim, longe diversum de his rebus conceptum formandi, quem naturæ consentaneum esse a priori et posteriori abunde expertus sum. Unde adhuc semel animum ad historicam etiam veritatem *conspirationis* hujusmodi hæmorrhoidalium, ischiadicorum, nephriticorum, sanguinei mictus et podagricorum *consensuum* et *reciprocarum collisionem* aut *concursuum*, omnino advertere cohortor. Neque tamen hoc solum, sed superest utique circumstantia adhuc ad historiam ipsam pertinens, nullatenus postrema dignitate æque atque ordine; nisi quod hunc familiarius ita potius invertat aut turbet, ut nulla habita ratione prioris aut posterioris vel quolibet tempore, ceu promiscue, minus auspicato successu sese exserat. Est hæc *reciprocatio arthritico-podagricorum* pathematum cum hypochondriasis, impetuosis quantumque affectibus: nempe non simpliciter spasticoten-

ſivis, ſed omnino graviter congeſtoriis ſanguinis, et hoc ipſo viſcerum inflammatoriis, non magis periculoſis, quam ſubinde etiam funeſtis." J. E. STAHLII, *Theoria medica vera.* Hallæ, 1737. P. 1033. § XXI. XXII.

It is obvious, from this quotation, that in the ſenſe which he affixed to this alternation, Stahl followed his own ſyſtem. He did not indeed derive hypochondriaſis from an arthritic matter, nor did he conſider this as the proximate cauſe of the diſeaſe; but, according to him, the hypochondriaſis, gout, podagra, and a hundred other morbid phenomena, were *molimina naturæ*, generated by congeſtions and diſorders in the circulation, and in the treatment of which every thing depended on the hæmorrhoidal flux, the great axis round which the whole of his ſyſtem turned. Much truth is doubtleſs implicated in this ſyſtem, which was founded on an accurate obſervation of nature; yet, on the whole, it only proves that a '*Theoria medica vera*' may contain many and conſiderable errors, which, however, we cannot diſcuſs in this place, without treſpaſſing too much on our room, and the patience of our readers.

On the Application of hot Flour in Eryſipelatous Inflammations, and cutaneous Eruptions: — extracted from a Memoir of ALPHONSE LEROY, *Profeſſor in the School of Medicine at Paris.*

IN the firſt number of this Journal, page 84, we mentioned the *external application of hot flour,* as a new remedy, which has been ſucceſsfully employed in Paris, by the ſtrong recommendation of LEROY. The importance of ſuch a diſcovery, and the celebrity of its author, demand a more particular account of its application, as well as its effects.

The firſt caſe related by Citizen Leroy, is that of a woman to whom he was called, in 1784, afflicted with an eryſipelas in her face, accompanied with ulcers. Having formerly obſerved, that lotions, cataplaſms, decoctions of elder, and fat ſubſtances, were often hurtful in eryſipelas, he thought proper to forbid the uſe of them to his patient, and preſcribed the application of wheat-flour, heated in a ſkillet. A ſurgeon, however, who came in immediately after, ſtrongly condemned this remedy, and perſuaded the patient to apply a poultice of bread and milk. Next day, Cit. Leroy found her face in a deplorable ſtate; the eyes ſwelled, and running with water, and the power of viſion apparently loſt. This dreadful effect from the application of a cataplaſm, for only twelve hours, ſtill more confirmed him in the opinion, that *deſiccatives,* ſuch as hot meal, and hot aſhes, were moſt proper in many cutaneous diſeaſes.

In

In 1791, he was called to the female citizen DANGIVILLER, whom he found in a miserable situation. The disorder had begun with large ulcers on her arms, legs, and feet, filled with a clear aqueous humour, which turned into white matter, resembling that in the small-pox, and threatened to spread over the whole body. Her attendants had placed her on a couch, and covered the ulcerations with cataplasms. The fever was broke out, and there began to appear little black mortified spots. Not thinking it proper to make too rapid a transition from moistening to drying applications, Citizen Leroy prescribed, for twenty-four hours, a paste between two pieces of fine linen, to be changed every six hours: next day, he ordered the parts affected to be covered with dry and hot flour. This remedy was immediately related and ridiculed at court. The physicians amused their friends afflicted with similar complaints, by passing witticisms upon the flour-bath; but they did not long enjoy their laugh, for Leroy's patient quickly recovered.

In 1793, Leroy was called to a woman, who, during her imprisonment, had made use of great quantities of vinegar, as a preventive against the jail fever. When he saw her, she had been five weeks confined to her bed, covered from head to foot with suppurating ulcers. Under a large pellicle he observed a watery humour, which thickened into pus. Notwithstanding the assiduous attention of Cit. OBERLIK, an eminent physician at Noyon, who had ordered dry rags and lint to be applied to the sores, and seldom poultices, the disease increased, and the patient was reduced nearly to the last extremity. Citizen Leroy directed the suppurating parts to be covered with hot flour; he also ordered a decoction of bark, to be taken several times a day. He prescribed weak broth of veal, or fowl, which they had not ventured to give her, for fear of increasing putrefaction, a very generally adopted maxim in medicine, but too often fatal in its effects. In a short time, however, his patient recovered.

Last summer he was called to Citizen DELASSALE, aged 65 or 66, who had, for several years, been afflicted with a succession of disorders. He was threatened with dropsy in his breast; then attacked with a catarrh, which was succeeded by an excessive hæmorrhage of the lungs. At length, having recovered from these different diseases, he was troubled with ulcers on his back, shoulders, and breast. He would have appeared like a person flayed, if the pellicles which covered the ulcers had been taken off. The Professor caused him to be covered with linen cloths, filled with hot flour, powdering at the same time the suppurating parts, which began to emit a fetid smell. This, with the extract of bark, weak broth, and light food, completed his cure. Notwithstanding the fever, he prescribed the broth,

consider-

considering moist and sweet articles of food necessary in debilitating fevers, which are very different from those of an inflammatory kind.

Very lately, he was called to the chambermaid of the female Citizen Merlin, wife of the present Director. Her disorder was an erysipelas in the face and neck. They had been bathed with elder-water, and assumed a serious appearance, the fever commencing with drowsiness. Cit Leroy prohibited all wet applications, and substituted dry flour, keeping her body open, which soon brought her out of danger.

The same remedy was successively employed by Cit. Leroy in the ring-worm, or tetters in the face, which seemed almost incurable. This regimen is also applicable in swellings of joints, in which the watery or moist applications are obviously injurious.

Thus (concludes Leroy) dry and hot flour, hot-ashes, earths, aromatic and other vegetable powders, combined with heat, are powerful remedies. The watry element appears only proper to cure the internal disorders of the animal economy. These observations he hopes will excite the attention of practitioners to the opposite element, viz. dry and earthy substances.

Whatever merit may be due to Professor Leroy for his useful suggestions, he is not entitled to that of originality; nor will any experienced practitioner agree with him, that *dry* applications are useful in *all* stages of erysipelas, and other cutaneous diseases, as he seems inclined to maintain.

Dr. Unzer, of Hamburgh, as well as Dr. Gesenius, of Nordhausen, mention in their several works, a powder which has long been used in Germany, as a powerful discutient in erysipelas, arising from external injury, if the complaint be not merely a symptom or crisis of another more important disease. This powder consists of a mixture of dry *flour* with aromatic vegetables, a small addition of sugar of lead, instead of which, if occasion requires, camphor is sometimes substituted. If the ingenious Leroy had pointed out, with accuracy and precision, the particular habits, temperaments, constitutions, and other circumstances which deserved to be noticed in his patients; if he had informed us of the predisposing and proximate causes which gave rise to the virulent cutaneous disorders he has cured; and lastly, if he had described nosologically the particular species of cutaneous eruptions, together with the character and type of the fever which accompanied the complaint in each individual patient—the medical world would have been infinitely more indebted to him for such information, than for the most favourable accounts he could give of *general*, or, to speak more freely, *empirical practice*.

W.

An

An extraordinary Case of difficult Parturition, successfully treated:—by Dr. Thomas Archer, *of Harford-Town, Maryland.*

ON the morning of the 9th of May last, I was requested to visit a female servant of Mrs. E. who had been in labour four days. On examination with my hand to know the situation of the child, I was surprised to find that the os uteri was not dilated to more than the size of a halfpenny. It formed a thick, rigid, cartilaginous ring, not yielding nor becoming softened by the pain. The midwife in attendance informed me, that the patient was in her 30th year; that at her fifteenth year she had a prolapsus uteri, which was reduced, after it was washed in a strong decoction of white-oak bark, and dusted with powdered resin; that this was her first child; that her pains had been considerably forcing, but the intervals between them long; and that the waters had been gradually discharging for two days. From this statement of her situation, I did not doubt but her labour would be lingering. Her constitution was robust and strong. Her pulse was evidently marked with symptoms of tension or convulsive action. I let blood to eighteen ounces, directed gentle laxatives, with emollient glysters, to be administered occasionally; oleaginous injections into the vagina, and the vapours of hot water were advised, as means for relaxing the os tincæ. She took a dose of opium and stramonium to procure rest, and to remove unprofitable pains. I now left her to the care of the attending midwife, till the following day in the evening.

May 10th. At this time there was no perceptible alteration in the dilatation of the os uteri. The child's head could now with difficulty be felt through the os uteri, which was advancing with every pain, without dilating in the least. A few pains protruded the uterus, with its contents, without the os externum! The child was now evidently dead; which, from several well-marked circumstances, had taken place about ten days previous to the present period. I dreaded the event of a case so new and alarming, and informed her mistress, there was scarcely a chance for her life; that it was possible to deliver her, but the consequence of the operation might be fatal to her. The distance of a physician rendered it impossible to call a consultation. Death appeared as the closing scene of every plan I proposed; in fact, her situation required such immediate assistance, that there was scarcely a moment for deliberation. To leave a mass within the uterus, which was hourly becoming more offensive, and to be an idle spectator of the fatal event that must ensue, was depriving her even of the chance which a doubtful and desperate remedy afforded.

I recol-

I recollected having read ſeveral well atteſted caſes, where the uterus was lacerated by its violent contraction round the body of the child in parturition. The child was ſqueezed partly through the aperture into the abdomen; it was, however, delivered, and the lacerated uterus healed without any difficulty, or even the occurrence of an uncommon ſymptom. The favourable event of theſe extraordinary caſes, determined me to hazard an artificial diviſion of the neck of the uterus (which appeared to be leſs dangerous than a laceration), to make room for the delivery of the child. Unknown to her, or any of the attendants, excepting the midwife who held the candle (for it was now night), with a common ſpear-pointed lancet, I made *three* inciſions in the neck of the womb, which was very much diſtended; each about two inches in length, viz. one from the uterus leading towards the urethra; one towards the perinæum; and the third towards the left labium. The pains, at this time, were not ſtrong; yet they were ſufficient to expel the child. After the inciſions were made, the delivery was almoſt inſtantaneous. The umbilical chord was wrapped round the body, arm, and neck of the child. The inciſions produced no pain, neither did there any hæmorrhage follow the lancet. The uterus, after the ſeparation of the ſecundines, which came away without difficulty, contracted, and returned with but little aſſiſtance to its priſtine ſituation.

The patient was now put to bed, and deſired to be kept quiet. I directed anodynes to be given occaſionally, and glyſters to be adminiſtered, ſo as to procure one or two dejections daily. Neither ſoreneſs, pain, nor fever followed this practice, more than would have happened in any eaſy, natural labour! The lochial diſcharges were very inconſiderable, and not at all offenſive. She was up and walking about her room in three weeks after delivery, and is now in perfect health.

Singular Caſe of an Omental Hernia:—By Dr. JAMES STRATTON, *of Swedeſburgh, New Jerſey.*

ON the 26th of April, 1795, W. C. of the county of Salem, in New Jerſey, aged 45, of a firm conſtitution, was attacked with a violent cholic. On the 28th his bowels were freely opened, and ſome relief was obtained by injection: 30th, the bowels continued open, but very uneaſy; a hiccup, or a kind of belching, was obſerved, which frequently brought up a part of the contents of the ſtomach. On examination, a tumour was found in the right groin, of about the ſize of two fingers, owing to the protruſion of a portion of the omentum through the ring in the abdominal muſcles,

muſcles, forming an omental hernia. After plentiful bleeding, attempts were made to reduce the protruded part, without effect; the tumour being hard, and very *tender,* * cold ſaturnine applications were then induſtriouſly employed, and continued for ſeveral days; during which time, ſeveral attempts were made to reduce it, but with no better ſucceſs. The patient having refuſed, after repeated ſolicitations, to ſubmit to any operation, remained in nearly the ſame ſtate until about the 10th of May, being two weeks after the attack, when the tumour ſubſided, and became ſoft, inſenſible, and crepitous; at the ſame time, ſome appearance of tumour was obſerved in the moſt depending part of the ſcrotum, accompanied with pain. This increaſed rapidly until the 14th, when the tumour, having attained the ſize of a man's head, burſt, pouring out a quantity of pus mixed with fetid ſanies. The ſtrangulated and ſphacelated parts of the omentum having been ſeparated from the ſound, after deſtroying the hernial ſac, had fallen down into the ſcrotum, producing inflammation, and ſuppuration ſufficient to effect their diſcharge. The abſceſs in a few days began to heal, and, by ſimple dreſſings only, the patient recovered, and is now living, without experiencing any inconveniency from what has happened.

On the practical Study of Botany, by Means of Chemical Analyſis :—chiefly abridged from the original Papers of Dr. F. S. Hermbstaedt, &c.

[*Continued from Number I. p.* 72—77.]

TABLE SECOND.

A general View of the SECONDARY ELEMENTS *of vegetable Bodies, which cannot be exhibited as Objects of Senſe, in a ſeparate State.*

1. THE *aſtringent* principle.—Subſtances which are ſuppoſed to contract the animal ſolids (or, according to others, to produce ſome beneficial change in the body, either by ſtimulating the nerves of the ſtomach, or affecting the maſs of the fluids), are, in a *medicinal ſenſe*, termed *aſtringents.* This definition is, however, very imperfect; inaſmuch as by aſtringents are more properly meant, *tonics*, or ſuch ſtrengthening remedies as are given for the purpoſe of bracing the elementary fibres of the body, when they are perhaps too looſely connected, and of relieving weakneſs

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* We ſuppoſe the author means, *ſenſible to the touch.*

weakneſs in the ſyſtem, ariſing, as is conjectured, from want of *tone,* or defect of elaſticity in the veſſels.*

In a *chemical ſenſe,* which more properly applies to the ſubject of the preſent inquiry, the *aſtringent* principle, in general, denotes only that property inherent in vegetable ſubſtances, by which leather is tanned, and a black colour produced, when combined with ſolutions of iron. This aſtringent property is moſt copiouſly contained in *galls,* and is in every reſpect analogous to that contained in the Peruvian bark, and many other aſtringent and bitter vegetables.—The *gallic acid of* SCHEELE is not a *pure* aſtringent ſubſtance, but is combined with a conſiderable portion of vegetable acid. Its preſence may be eaſily diſcovered, by making the experiment with a ſaturated ſolution of iron, which thus exhibits a black precipitate. This aſtringent principle is rendered volatile in a warm temperature, without loſing the property of ſtriking a black colour.

2. The *colouring* principle. This is unqueſtionably connected with a peculiar modification of aſtringency, as all colouring vegetable ſubſtances poſſeſs more or leſs of that property. The origin and phenomena of the different colours, are probably founded on the different degrees of refraction of the rays of light proceeding from the coloured object towards the eye.

3. The *acrid,* or pungent principle. This is of a volatile nature, and may be totally expelled by heat. It is moſt copiouſly found in horſe-radiſh, muſtard, onions, &c.; but it cannot by any means be exhibited completely pure and free from other ingredients. The very pungent or burning quality of the *freſh* root of the wake-robin (*Arum maculatum, Linn.*), the pellitory of Spain (*Anthenis pyrethrum, Linn.*), eſpecially in a *dry* ſtate; the mezereon,† *Daphne*

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* As the want of coheſion, ſo frequently obſerved in the fibres of the human body, is probably owing either to a watery conſiſtence, or diminiſhed proportion of the animal gluten in the circulating fluids, it is evident, that proper articles of food, ſuch as contain this jelly in conſiderable proportion, afford likewiſe the moſt effectual means of improving the fluids, reſtoring the loſſes ſuſtained, and thus invigorating the whole body. This, however, is a theory much conteſted, as being the grand pillar of what is now, by many, called in deriſion, '*humoral pathology.*' Without deciding on the merits of *humoral, nervous,* or (what is the moſt abſurd of any,) CHEMICAL PATHOLOGY, we ſhall only remark, on this occaſion, that it is of the utmoſt conſequence to the medical practitioner, to determine with critical preciſion, whether the diminiſhed action, as well as the want of coheſion in the fibres, proceed from the impaired ſtate of the fluids, and particularly the gluten, or from too great extenſion and ſubſequent relaxation of the fibres themſelves. W.

† The *mezereon* and *anemone* have lately been introduced into medicine, on account of their active and remarkable effects on the human ſyſtem, in caſes of lues, ſcrofula, &c.; but I cannot forbear remarking, with indignation, that the ever-buſy London quacks have already

(*Daphne Mezereum, Linn.*); the meadow anemone, (*Anemone pratenſis*; *Lin.*) and ſeveral other vegetables, is entirely owing to this acrid quality.

4. The *narcotic* principle is contained chiefly in thoſe vegetables which, if uſed in ſufficient quantity, have a direct tendency to induce ſleep, ſuch as the poppy, the hemlock, and the deadly night-ſhade. It is of a volatile nature, as is evident from the pernicious exhalations of narcotic ſubſtances, when they are expoſed to the action of heat. But this deleterious principle is ſo intimately combined with the baſis of gum and ſoap, that it cannot be exhibited in a ſeparate elementary ſtate.

5. The *bitter* principle. It has not yet been determined with accuracy, whether a peculiar bitter ſubſtance really exiſts in nature, or whether the bitter taſte of many vegetable bodies is the reſult of their combination with other conſtituent parts. Nor has any ſubſtance whatever, hitherto, afforded this principle in a free or uncombined ſtate; for, in the chemical analyſis of vegetable bodies, we always find it blended with gum, mucilage, or ſoap.

6. The *odoriferous* principle appears to be moſt intimately combined with the eſſential oils of vegetables, expreſſed or diſtilled. It has been already remarked, that it is not yet decided by ſufficient experiments, whether the odoriferous principle is not reſiding in ſome other element, totally different from that of the oil; as many vegetable bodies emit remarkable fragrance without affording any quantity of eſſential or diſtilled oil, in proportion to the degree of their odour *.

TABLE

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already ſeized upon theſe powerful ſubſtances, in order to make them the *oſtenſible* agents in their "*Botanical Syrups, Vegetable Balſams,*" &c; when, in fact, the principal ingredients of their noſtrums, conſiſt of the moſt virulent metallic preparations, ſuch as, ſugar of lead, the oxydes of copper, mercury, arſenic, &c.

W.

* We cannot, in this inſtance, reaſon from analogy; for ſome vegetables apparently abounding in oil, yield very little of it, and others none at all; for inſtance, roſes and chamomile flowers, though of a ſtrong and permanent ſmell, yield but a ſmall quantity of oil; a pound of the former producing no more than from three to four grains of eſſential oil, and a pound of the latter, about half a drachm, or two ſcruples. The violet and jeſſamine flowers, which perfume the air with their odour, are deprived of this agreeable property, by expoſing them to a very moderate fire, and do not afford the leaſt particle of oil in diſtillation, unleſs immenſe quantities be at once ſubmitted to this proceſs; while ſavin, the unpleaſant ſcent of which is perceived at a conſiderable diſtance, parts with the largeſt proportion of oil of almoſt any known vegetable; inſomuch, that one pound of it yields from two to three ounces of eſſential oil, being the eighth, and ſometimes the ſixth part of the weight of the plant.

TABLE THIRD.

Simple Vegetable Acids.

1. The acid of *tartar*, or tartareous, acid, which is obtained from ſome vegetable ſubſtances, hereafter to be ſpecified, in a pure ſtate, while in others we find it combined with alkaline ſalts and earths;—it is frequently blended with other vegetable acids, as well as with the matters of gum and ſoap. This acid forms rhomboidal cryſtals, which ſwell when expoſed to the action of a moderate fire, emit the ſmell of burnt cream of tartar, and at laſt leave behind a ſpongy coal in the crucible.

2. The acid of *apples*, or the *malic* acid, is moſt copiouſly contained in the juice, both of ripe and unripe apples. Scheele was certainly the firſt chemiſt, who taught us to ſeparate this acid, which ſo far differs from the acid of tartar, that it does not form cryſtals, and, if combined with calcareous earth, is more eaſily ſoluble than the tartareous acid.

3. The acid of *lemons*, or the *citric acid*, is combined with the malic acid in the juice of lemons, in the ſap of gooſberries, as well as in a variety of other fruits, but particularly in the barberry or pipperidge-fruit. It forms lamellated cryſtals, which poſſeſs a more acrid taſte than thoſe of the tartareous acid, and which, when combined with magneſia, are eaſily ſoluble in water.

4. The acid of *ſorrel*, or the *oxalic* acid (formerly called acid of ſugar, or ſaccharine acid), cryſtallizes in rhomboidal columns, and is readily exſiccated, or reduced to powder, if expoſed to the action of atmoſpheric air. Its cryſtals diſſolve in water with a peculiar ruſtling noiſe, and poſſeſs an acrid ſour taſte.

5. The acid of *benzoine*, or the benzoic acid, is ſufficiently known by the name of *flowers of benzoine*. This ſubſtance apparently conſiſts of a baſis rather compounded than ſimple. Beſides the concrete reſinous juice of benzoine, this acid is alſo diſcoverable in the Peruvian balſam, in the watery infuſion made of the flowers of cinnamon and caſſia, and in a few other vegetables.

6. The acid of *milk*, or the *ſaccho-lactic* acid, is produced from the ſugar of milk, by boiling it with a proportionate quantity of nitric acid. It may likewiſe be obtained from gum arabic, and the mucilage of tragacanth. This acid appears to be a conſtituent part of many vegetables, and, on that account, deſerves great attention in their chemical analyſis.

There are ſeveral other vegetable acids uſually enumerated by authors, ſuch as the *gallic* acid, which has been ſtated in the Second Table, as forming the *aſtringent principle*; the *pyro-ligneous* acid, formerly termed empyreumatic acid ſpirit of wood; the *pyro-mucous* acid, otherwiſe called, ſyrupous

ſyrupous acid, or ſpirit of ſugar, honey, &c.—the *pyro-tartarous,* or ſpirit of tartar; the *ſuccinic,* commonly called acid of amber; and perhaps a few others: but all theſe now ſpecified, are either modifications of one or other of the preceding ſix ſpecies, or they cannot be ſtrictly called *vegetable acids;* for inſtance, the *ſuccinic,* or the acid of amber, which is evidently obtained from a bituminous ſubſtance, though its vegetable origin can hardly be diſputed.

In the preceding three Tables, we have merely enunciated the primary and ſecondary conſtituents of vegetable bodies, without attending to the artificial products to be obtained from them, or to their reſpective effects on the human body. Before, however, we can attempt to enter upon the diſcuſſion of theſe important objects, it will be uſeful and neceſſary to premiſe a few particulars relative to the *laws,* by which a chemical analyſis of vegetable bodies muſt be conducted, and the views with which it ought to be undertaken.

Although *ſuch* an analyſis ſhould not be productive of *immediate* and *extenſive* benefit to the chemiſt, whether conſidered as a man of ſcience, or a commercial operator, yet it will be admitted, that it is of the utmoſt conſequence, and promiſes great and indubitable advantages to the medical practitioner.

When we endeavour to inſtitute an accurate analyſis of vegetable bodies, we ſhould never loſe ſight of this fundamental propoſition, *that every plant is a perfect organic body.* We ought, farther, to direct our conſtant attention to the following axioms: 1. That organic bodies, in a temperature conſiderably above the boiling point of water (212° of Fahrenheit, or 80° of De Luc), are not decompoſed in ſuch a manner as to exhibit their proximate, but rather their remote conſtituent parts; and 2. That in the re-union of the latter, in different proportions to each other, new chemical products reſult from the operation;—products which, in this ſtate, formed no elementary principle in the vegetable body. If theſe circumſtances be duly conſidered, no further proof will be demanded, that the proceſs of analyſing ſuch ſubſtances in the *dry way,* (as hitherto practiſed by all the ancient and many modern operators, with whom the agency of fire, and the uſe of an alembic, were the principal and almoſt only requiſites to a chemical laboratory) is in every reſpect inſufficient to diſcover the true elementary conſtituents of bodies ſubject to ſuch analyzation.

According to theſe premiſes, the temperature in which the chemical analyſis of organic ſubſtances is to be performed with ſucceſs, muſt never exceed the boiling pint of pure water. In order to aſcertain this point with a ſufficient degree of accuracy (eſpecially as the co-operation of heat is in almoſt

every

every inſtance abſolutely neceſſary to effect the decompoſition of organic bodies), a vehicle ought to be employed, which is capable of checking any exceſs of the temperature before ſtated.

Such a vehicle we find in the pureſt water. To this ſubſtance, if its expanſion be not prevented, by confining it in cloſe veſſels, and excluding the acceſs of atmoſpherical air, we can eaſily communicate the greateſt quantity of free *caloric* (matter of heat), without exceeding, in any remarkable degree, the maximum of the temperature it has thus acquired;—provided however, that during the experiment there be no greater variation in the ſtate of the barometer, than from 29 to 30 inches.

Although the truth of this propoſition is now fully eſtabliſhed, it will nevertheleſs be uſeful, and even neceſſary, for the information of thoſe who are not thoroughly acquainted with the particulars of the experiments made on this curious ſubject, to premiſe a ſhort analytical account of the facts on which it is founded, and by which it is ſupported:—

If a pound of ice or ſnow, the natural temperature of which is uniformly 32° of Fahrenheit, be mixed with a pound of water, heated to 172° of the ſame ſcale, it will be found that the mercury in the thermometer plunged into this mixture, even after all the ice or ſnow has been melted, does not riſe higher than 32°—ſo that the temperature of the mixture remains perfectly equal to that which the ice or ſnow poſſeſſed, previous to the addition of hot water: as the temperature of this, which before was 172°, is thus deprived of 140° of its heat, and reduced to 32°, or the freezing point, the deficient 140° of caloric have combined with the ice; and although they have not in the leaſt affected its temperature, they have nevertheleſs changed its form, and converted it from a concrete into a fluid body. On the ſtrength of this experiment, the following aphoriſm is incontrovertibly eſtabliſhed: *That caloric may unite with bodies in conſiderable quantity without producing any change in their temperature; but their forms are, in this combination, neceſſarily changed.*

If we farther apply this invariable law of phyſics, in communicating free caloric to water itſelf, the temperature of which is 32°—if a quantity of free caloric be imparted to it, till it acquire the higheſt degree of heat it is ſuſceptible of, namely that of 212°, we ſhall then find, that a new relation takes place between the water and the caloric. For, if we attempt to communicate a ſtill greater quantity of caloric to the water already heated to 212°, it is no longer ſuſceptible of additional heat, but the caloric enters into a new chemical combination with the water. And if the ſtate of the barometer remain as before ſtated at 30°, and that of the thermometer

at

at 212°, a new phenomenon will preſent itſelf to the obſerver: the water will change its form a ſecond time; and it will be converted from the fluid ſtate to that of vapour—in conſequence of the caloric having united with the water, and aſſumed an elaſtic form. Hence the aphoriſm already mentioned ſtands amply confirmed by experience, *that caloric is not capable of raiſing the temperature of bodies, however their form be changed by its combination with ſuch bodies.*

The late experiments made by Dr. CRAWFORD have ſatisfactorily taught us, what quantity or proportion of caloric is requiſite to unite with boiling water, in order to change it into a ſtate of vapour. This philoſopher inquired into the capacity which iron has of uniting with caloric, and found, that the proportion ſubſiſting between iron and water, in this reſpect, was eight times leſs in the iron than in the water. He employed, for inſtance, eight parts of iron filings, heated them to 300° of Fahrenheit, and poured to theſe *eight* parts of iron, *one* part of water, heated to 212°. He obſerved that the water was inſtantly converted into vapour, but the temperature of the vapour, as well as that of the mixture, amounted to 212° only; conſequently the iron had been deprived of 88° of caloric by means of the water; and theſe ought to have communicated to the water a temperature equal to 300°; but the temperature of the vapour remained equal to 212°, and hence we muſt conclude, that the 88° of caloric had actually been fixed by the water, and transformed it into a fluid vapour.

From what has been now advanced, it may be clearly perceived, that pure water is a body perfectly well adapted for the chemical analyſis of organic ſubſtances, in order to prevent that degree of heat by which their organic ſtructure might be deſtroyed, or at leaſt decompoſed and reduced to the more remote conſtituent parts; as it cannot be raiſed to a higher temperature than that of 212°, in which vegetable ſubſtances ſuffer no material change in their elementary conſtituents. As, farther, pure water is a very proper menſtruum for the greateſt number of thoſe formative principles which are diſcoverable in vegeto-organic bodies, it is eminently qualified to ſeparate them from other inſoluble ſubſtances, and to exhibit them in a ſtate, which enables us to proſecute the analytical method of examining their component parts with ultimate ſucceſs.

(To be continued in our next Number.)

On the Origin and Properties of Liquid Styrax; * *extracted from a Memoir read to the Medical Society of Paris; by Citizen* BOUILLON LA-GRANGE.

THE preparation of a medicine can never be made with ſucceſs, unleſs the nature of the ſubſtance of which the mixture is compoſed be well underſtood. In pharmacy we find a number of chaſms of this kind; liquid ſtyrax is one of thoſe ſubjects, on which different conjectures have been formed, and the nature of which has not hitherto been completely developed.

It is well known, that liquid ſtyrax has been employed for ages, in a medicament to which it formerly gave its name, but which now is almoſt entirely abandoned, the *unguentum e ſtyrace.* It is alſo well known, that the preparation of this ointment varies according to different authors, and that all of them, for want of having a correct knowledge not only of ſtyrax, but of the manner in which caloric and oils act on reſinous ſubſtances, have fallen into errors which muſt, in general, be attended with an imperfect method of preparing certain plaiſters and ointments.

Liquid ſtyrax is a reſinous juice, called by the Arabians, *Mitia*; by the Turks, *Cotter-miza*; by the Chineſe, *Roca malha*; and by the Europeans, falſe aromatic Storax. This reſin is liquid, glutinous, little, or ſcarcely at all pellucid, of a grey-brown colour, with the ſtrong, but diſagreeable ſmell of ſolid ſtorax, and of a ſomewhat pungent aromatic taſte; it very ſeldom, if ever, comes to us in a pure unadulterated ſtate.

A great diverſity of opinions prevails relative to the origin of this ſpecies of reſinous balm; ſome will have it to be a turpentine, compounded or boiled up with oil, wine, &c.; others maintain, that it is an extract obtained by the decoction of ſeveral parts of the amber-tree. It ſhould be obſerved, however, that JAMES PETTIVER, an apothecary of London, and a ſkilful naturaliſt, does not heſitate, in the "*Phil. Tranſ.* No. 313, to declare, that it is the juice of a certain tree, called *Roſa malos, (Liquidambra*

* "The genuine liquid Styrax is, even at Mocco, a very rare commodity, and ſold at a very high price, and it has ſeldom entered the ſhops of our apothecaries. A reſinous juice, poſſeſſing ſomewhat of the ſame ſenſible qualities, brought from the Spaniſh provinces of South America, and perhaps the product of the ſame tree, is ſometimes ſold in place of it. But much more frequently what we meet with under this name, is an artificial compound of ſolid ſtorax, common reſin, wine, and oil, beat up together, to a proper conſiſtence. Concerning the real virtues of liquid ſtyrax, obſervations are altogether wanting, &c."

New Edinburgh Diſpenſary.

ambra ſtyraciflua, Lin.) which grows in the iſle of Cobras, in the Red Sea, about three days journey diſtant from the city of Suez. According to this author, the bark of the tree is peeled off every year; it is afterwards bruiſed or pounded, and boiled in ſea-water to the conſiſtence of glue; then the reſinous ſubſtance which ſwims at the top is collected; it is further purified and refined by diſſolving it again in ſea-water, and ſtraining the ſolution; thus prepared, it is incloſed in ſeparate caſks, together with the reſiduum of the proceſs now deſcribed. Theſe two ſorts of ſtyrax are then tranſported to Moco, and expoſed to ſale at the celebrated Arabian fair.

This perfume, ſays *Valmont Bonare*, is in great eſteem among the Orienals. A caſk containing 420lb. ſells at from 180 to 360 pounds of ſilver, (*livres d'argent*) according to the purity of the ſtyrax. This naturaliſt mentions his having ſeen, in a Turkiſh Veſſel, a barrel made of ſtyrax wood, and which, as he was aſſured, had been formed of the trunk of a tree producing the liquid ſtyrax itſelf; the barrel was two feet in diameter; the trunk had been hollowed longitudinally, to the thickneſs or depth of the lower end, the upper end being made of pieces put together: the wood was rather hard, odoriferous, and of a yellowiſh colour. He was further informed, that the ſarcophagi, or mauſolea of great men were generally made of this ſpecies of wood.

There is, beſides this, another ſubſtance to which the name of ſtyrax has been given; it is imported from America, but is in fact the liquid amber.

This is all that relates to the hiſtory of ſtyrax, among which the account given by Pettiver, appears to be the moſt conſiſtent with the chemical analyſis of that ſubſtance.—As to that which is ſuppoſed to be artificially compounded, it is only the product of fraud or avarice; but it is eaſy to diſtinguiſh the true ſtyrax from that which is manufactured.—The following are the phyſical or ſenſible properties of the liquid ſtyrax uſed as an article of commerce: it is of a greeniſh-grey, the taſte rather aromatic, leaving a ſlight acidity on the tongue. That which exudes from the tree, not having undergone the boiling proceſs we have before deſcribed, and which is called the *true ſtyrax*, is of a deep red colour, of an agreeable ſmell, approaching to that of the balſam of Peru, the taſte pungent, leaving on the tongue a ſmart impreſſion of acidity; this ſpecies is very rare.

The chemical properties of the ſtyrax, which is an object of trade, are too numerous to be inſerted here. From the reſult, however, of its chemiſial analyſis, the following concluſions may be deduced: 1. That ſtyrax is a reſinous balm, analogous to ſtyrax or benzoine; 2. That this ſubſtance is compoſed

composed of bensoic acid and of a resin, and that the other matters found in it, are not naturally a part of its composition; 3. That the most simple and advantageous method of purifying styrax is, to make a tincture of it in highly rectified spirits of wine, as it may thus be obtained free from all heterogeneous ingredients; 4. That, in order to prepare the ointment of styrax, and in general, all unguents composed in part of resinous substances, they should not be made too hot, particularly styrax, which is easily decomposed by caloric; as this agent very readily absorbs the oxygen, while the benzoic acid is volatilized at a low temperature. And lastly, that there is a very remarkable difference between the ointment prepared with the styrax purified by alkohol, and that purified by the action of heat; the former has an agreeable flavour of storax, and produces no feculent impurities by its union with other substances; while the latter has a strong, rather disagreeable smell, and always leaves behind a considerable sediment.

Chemical Considerations on the Effect of Mordicants, in dying Cotton Red:—By J. A CHAPTAL.

Extracted from his late Memoir read on this Subject, in the National Institute, at Paris.

THE fine red given to cotton, by means of madder, seems to be involved in an uncertainty similar to that prevailing in certain pharmaceutical preparations, the odd and complicated recipes of which have been hitherto respected from an ill-founded notion entertained by the mechanical operators, that the smallest change introduced into the process would destroy the general defect.

A whole month's labour is sarcely sufficient to terminate the different operations thought necessary to obtain the fine Turkey red, called *Aarianople*. For this purpose, a number of different substances are successively employed, soda, oil, gall, sumach, sulphat of alum, blood, madder, soap, the nitro-muriate of tin, &c.

The true method of simplifying this process is not by working at hazard, and attempting, without sufficient guides and experience, a practice different from that in common use. Chemistry is now so rapidly advancing in improvements, that all its operations may be reduced to simple principles, which, when once established, will become, in the hands of the artist, what axioms are to the mathematician.

The three principal *mordicants* in dying cotton red, are, *oil, galls*, and *alum*. To take the red of madder, cotton should be duly pregnated with oil;

oil. This preparation is made by combining oil with a weak ſolution of ſoda. The effect of this alkaline lye is merely to dilute, divide, and ſpread the oil uniformly over all the parts of the cotton. Pot-aſh, however, will produce the ſame effect as the ſoda, which is an object of ſome conſideration in northern countries, where the latter is ſcarce and dear, while pot-aſh is very common. Yet the ſoda ſhould be in a cauſtic ſtate, and contain ſome of the muriate; this cauſticity is the effect of its proper calcination.

In the choice of the oil great care ſhould be taken, as well as in that of the ſoda. The oil uſed for painting is the moſt proper; not the fineſt oil, but that which contains a ſtrong portion of the *extractive principle*. It ought, moreover, to be in exceſs, that is, not in a ſtate of abſolute ſaturation with the alkali.

When the cotton has been ſufficiently impregnated with oil, it is then ſubjected to the operation of *galling*; here galls are of great ſervice, and cannot be replaced by any other aſtringent vegetable ſubſtances, whatever quantities of them may be employed.

The third mordicant neceſſary, in the dying of cotton red, is the ſulphat of alum. It not only poſſeſſes the property of giving a gloſs to the red of madder, but it contributes alſo, by its decompoſition, and the fixation of its aluminous baſe, to give ſolidity to the colour. To judge of the effects of alum in dying cotton, it may ſuffice to mix a decoction of galls with a ſolution of alum. This mixture inſtantly becomes turbid, and a greyiſh precipitate is formed, which, when dried, is inſoluble in water and in alkalies.—The ſolution of alum, however, ſhould not be too hot, as in that caſe a portion of the aſtringency obtained from the galls will eſcape, from the texture of the cotton, and then the decompoſition of the alum will take place in the immerſion; a circumſtance which muſt neceſſarily diminiſh the effect of the mordicant, and contribute to impoveriſh the colour.

Here then is a combination of three principles, viz. oil, the aſtringent principle, and the baſe of alum, which produce the united effects as a mordicant to the red of madder. If ſeparately employed, they will neither be attended with the ſame fixidity, nor afford a ſimilar gloſs and brightneſs in the colour.

This mordicant is unqueſtionably the moſt artificial that is known in dying, and the operation of fixing the red colour in cotton is alſo the moſt complicated of all others. It preſents to the chemiſt a ſpecies of combination, highly intereſting in the proſecution of his ſtudies.

Experience alone is sufficient to conduct us in these numerous opera-tions and experiments: we ought to reason upon them, and calculate both the principle and result of each, without which, the labours of the most experienced operator, far from enabling him to correct errors, and obtain uniform products, will only present a discouraging alternation of successes and failures.

A Comparative View of the Principal Theories, which have prevailed in Chemistry; &c. By Dr. FRANK, *Sen. of Vienna.*

[*Continued from No.* I. *page* 63—70.]

HEAT and *Light* * are, according to modern experiments, the effects of two different simple substances. They act either separately or in combination; in the latter case the result is called fire. Both are originally fluid bodies and provided by nature with the highest degree of expansibility. It is this property which renders them capable of diminishing or suppressing the power of attraction in all other bodies, and transforming them from a solid into a vaporific or elastic state, while they enter with these bodies into chemical combinations, according to the greater or less affinity, or elective attraction subsisting between them.

Air and *Water* are not simple bodies, therefore do not deserve the name of *elements*, which was given them by *Aristotle*; because both are compounded of parts which can be chemically separated. The *acids* and metallic calces likewise do not belong to the list of elementary substances; such as *carbon*, *sulphur*, *phosphorus*, and the *metals*.

The air of the atmosphere is a compound of two elastic fluids. One of these is not only totally unfit for respiration, but likewise incapable of supporting the flame of combustible bodies. Hence it is called mephitic, suffocative air, or more properly, according to the modern French nomenclature, *Azote (gas azotique)* or by the older Chemists, *phlogisticated air*. This irrespirable species of air constitutes about three-fourths of the whole atmosphere, with very little or no variation, in the most opposite climates; it is an element reduced to a gaseous form by the access of caloric, and we meet with it, as a constituent part of all animal and many vegetable bodies.

The second constituent element in the composition of the atmosphere, which forms about the fourth part of it, is that which renders it fit for respiration,

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* In the doctrine of Light, the author of this essay follows the opinion of Professor HERMBSTAEDT, of Berlin, and not that of LAVOISIER, who considers Heat and Light *modifications of the same substance.*

reſpiration, as well as combuſtion. This elaſtic fluid is a very remarkable agent in modern Chemiſtry, and its preſence is diſcoverable in the greater number of the phenomena which preſent themſelves to the inquirer. Its baſis is entirely different from that of azote, and it is found in all organized and many of the mineral bodies: and on account of its property of forming acids, it is now called the *acidifying principle*, or *oxygen*, in an abſtract ſenſe; but when it is exhibited to the ſenſes in a gaſeous ſtate, it is then termed *oxygenous gas*.

Beſides theſe, there are two other elementary ſubſtances, which deſerve particular attention in the New Syſtem of Chemiſtry—the *carbon*, or the baſe of charcoal, and the *hydrogen*, or the baſe of inflammable air. Both are conſtituent parts of all organized bodies: the former is the *pure charcoal*, but the latter cannot, independent of its combination with other ſubſtances, be exhibited to the ſenſes in any other but an elaſtic form, after having united with caloric; whence it has received the name of *hydrogenous gas*, or inflammable air.

Combuſtion can take place only in oxygenous gas, and depends upon a chemical decompoſition of this elaſtic fluid. All bodies of the animal and vegetable kingdoms, ſulphur, phoſphorus, and the different metals, effect this decompoſition of oxygen in a high temperature, while they unite with the baſis of it in a gaſeous ſtate, and diſengage the reſpective matters of heat and light, from which this baſis derives its elaſticity; ſo that accordingly as theſe ſubſtances enter into new combinations, the reſult of ſuch unions is either light or heat.

In the combuſtion of organized bodies, we find that oxygen is alternately decompoſed by carbon and hydrogen, which always exiſt in them as conſtituent parts. The latter, *hydrogen*, by its union with *oxygen*, produces water, but which, in the moment of its origin, is moſt commonly again decompoſed into its original conſtituents by the co-operation of the carbon, and deprived of its oxygen, which, *after having united with it, and formed the carbonic acid (fixed air * aërial acid)*, eſcapes in a gaſeous form.

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* Although it appears to have been unconnected with the deſign of Dr. Frank, to take notice in this Eſſay of every individual to whom the ſcience of Chemiſtry is indebted for its rapid progreſs; yet we cannot, without injuſtice, omit to mention, in this place, the radically important diſcoveries of Dr. Black, of Edinburgh, reſpecting one of the moſt intereſting airs, now called *carbonic acid*, as well as the ſenſible and latent properties of *caloric*. Theſe may juſtly be conſidered as the introduction to Dr. Priestley's diſcoveries, which, together with thoſe of *Bergman* and *Scheele*, in Sweden, have unqueſtionably laid the foundation of all the recent improvements in chemiſtry.

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The hydrogen thus diſengaged enters into a new combination; this becomes again decompoſed, and the alternate combinations and decompoſition in which light or heat are evolved, in this manner continue, until all the conſtituent parts of the combuſtible body have undergone this proceſs of diſſolution; and nothing but the earthy particles, combined with ſome inſoluble and incombuſtible ſalts, remain behind.

Theſe phenomena, during the combuſtion of animal and vegetable ſubſtances, however, take place only during the free acceſs of atmoſpherical air; if this be ſecluded during the proceſs, the reſult is very different.—As ſoon as the powerful agency of heat deſtroys the combination ſubſiſting between the conſtituent parts, the hydrogen of the ſubſtance under experiment, uniting with oxygen, forms water; which is partly decompoſed by the diſengaged carbon, partly changed into vapour, together with the carbonic acid and the gaſeous hydrogen generated in this proceſs. In the mean time there ariſes in moſt vegetable ſubſtances, as well as in animal fat, a *new combination of the carbon and hydrogen*, which combination produces an acid by means of the oxygen preſent. If this latter be almoſt conſumed, a new phenomenon occurs, and inſtead of an acid, the reſult is an *oil*, or a combination of *carbon* and *hydrogen*, with an inconſiderable quantity of oxygen. In animal as well as in many vegetable bodies, on account of the *azote* and *hydrogen* they contain, *ammonia*, or vegetable alkali, is generated inſtead of an acid;—in other reſpects, the phenomena are ſimilar to thoſe already ſtated, with this only difference ſubſiſting between vegetable and animal ſubſtances, that the former leave behind carbon deprived of hydrogen and oxygen, together with a few earthy and ſaline particles; while the latter exhibit a reſiduum of

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It would be unpardonable to withhold from theſe illuſtrious characters that ſhare of merit and praiſe to which they poſſeſs claims ſcarcely inferior to thoſe of the French chemiſts. We principally allude to the original diſcoveries made by Dr. Black, relative to the well-eſtabliſhed properties of *magneſia*, *fixed air*, and *latent heat*. His uſeful labours, during a long ſeries of years, as a luminous and celebrated lecturer, have been crowned with a degree of ſucceſs, almoſt unexampled in the annals of ſcience. Perhaps no profeſſor of chemiſtry ever enjoyed ſo much honour and ſatisfaction as has fallen to the lot of Dr. Black: he has educated a greater number of reſpectable pupils than any public teacher now living; inſpired the learned as well as the dilettanti of this country with a juſt taſte for the proſecution of chemical ſtudies; and, upon the whole, he has been eſſentially inſtrumental in improving that ſcience, by his excellent method of analytically and experimentally demonſtrating chemical truths; a method no leſs elegant than convincing.—On account of ill health, and the rapid advancement of age, he has lately been obliged to reſign his academical chair to his former adjunct, the preſent ingenious Profeſſor Hope; who, from his long reſidence in Paris, and the habits of intimacy he has cultivated with the moſt eminent French chemiſts, is equally zealous and able to eſtabliſh the antiphlogiſtic ſyſtem, in the Edinburgh ſchool, upon a ſolid and permanent baſis. W.

of carbon, combined with the phoſphat of lime, or a calx ſaturated with the phoſphoric acid.

In the combuſtion of *ſulphur* and *phoſphorus,* we obſerve phenomena very different from thoſe which preſent themſelves in combuſtible organized bodies. Sulphur and phoſphorus merely attract oxygen; they form in this combination peculiar acids, and thereby diſengage the reſpective elements of heat and light which appear in the form of flame. The acid generated from ſulphur and oxygen, if the former be completely ſaturated with the latter, is termed *ſulphuric acid (acide ſulphurique);* but, if a portion of ſulphur ſtill remains unſaturated, it is then called the *ſulphurous acid (acid ſulphureux);* ſo that the different termination of the laſt ſyllable is always uſed to indicate the degree of ſaturation in the acid. In a ſimilar manner is obtained from phoſphorus, either the *phoſphoric* or *phoſphorous acid.*

The *calcination* of *metals* is likewiſe a proceſs of *combuſtion.* Theſe ſubſtances combine with *oxygen,* loſe their luſtre and coheſion, and in this form are termed *metallic oxyds (oxides metalliques).* Some of theſe, however, ſuch as *arſenic, molybdæna,* black lead and *tungſten,* are capable of uniting with a larger portion of oxygen, and are convertible into *true acids.*

Hence the products of combuſtion are *water, acids,* and *metallic oxyds.* Their abſolute weight is uniformly greater than that of the ſubſtance from which they are obtained; becauſe the oxygen, which unites with them, is a ponderous ſubſtance. A clear proof of this aſſertion is the correſpondence of the additional weight in the oxyds, with that of the oxygen gas abſorbed by the metals.

But the proceſs of combuſtion is not the only one, in which oxygen enters into combination with other ſubſtances;—the proceſs of reſpiration; the ſpontaneous decompoſition of metals; electricity; the contact of bodies with thoſe ſubſtances to which oxygen is either looſely attached, or in which it exiſts in an abundant proportion, for inſtance, the acids; the proceſs of fermentation, &c. all theſe afford opportunities for the oxygen to form combinations.

In the reſpiration of animals, the oxygen gas is ſeparated by the lungs; during this admirable proceſs in the animal economy, it partly incorporates with the blood, and partly, with the baſe of carbon it meets with, forms the carbonic acid, which, together with the portion of azote inſpired from the atmoſphere, eſcapes in the ſubſequent expiration. As, however, the caloric of ſeparated oxygen gas is more than ſufficient for reducing the carbonic acid to an elaſtic form, the ſurplus of caloric is neceſſarily communicated to the animal body, which conſequently receives its conſtant ſupply of heat, from the more or leſs regular evolution of oxygen gas.

Thoſe

Those mineral productions which contain sulphur, as a constituent part of the ores of metals, are subject to spontaneous decomposition. The mechanical part of this simple process is as follows: metallic ores are placed in strata, over one another; water is poured over them, and thus they are exposed for some length of time, to the influence of the atmosphere, till they acquire a vitriolic taste. The consequent result is, in part, to be ascribed to the decomposition of the water, by the action of the metal, which deprives the former of its oxygen, and disengages the second constituent part of the water, hydrogen, which escapes in a gaseous form; and it partly depends on this circumstance, that the sulphur attracts as much oxygen from the atmosphere, as is necessary for its change into an acid. The product must be a metal, saturated with the sulphuric acid; for instance, the sulphat of iron.

The *acidification* of *azote* is accomplished by the influence of *electric matter*. This takes place either by the spontaneous effect of atmospheric air, and its natural electricity, on animal and vegetable substances which contain azote in abundance, as is the case in nitre-works; or by means of an artificial process, in which electric sparks are passed through a mixture of azote and oxygen. In both cases the *acid* of *nitre* arises, which according to the degree of its saturation with oxygen, is either called gaseous oxyd of nitrogen, *nitrous gas, nitrous acid (gas nitreux, acide nitreux)*, or if supersaturated with oxygen, *nitric acid (acide nitrique)*.

By treating or mixing substances with acids, those which have a greater chemical affinity or elective attraction to oxygen, than the basis of the former, viz. the acids, have to the latter, they likewise become oxydated. Such is the case when metals are dissolved in acids. The acid employed is, in this operation, regularly decomposed; the oxygen attaches itself to the metal, and reduces it to the state which it has assumed by combustion, or in other words, it becomes an oxyd. At this period only, the metal is in a proper condition of being received by the remaining undecomposed part of the acid, and a complete solution of it is accomplished. On these occasions, a gaseous substance is always evolved, but of a different nature, in different instances. If the nitric acid be used as a menstruum, the consequent expulsion will be that of nitrous gas; because one part of this acid is deprived of so much oxygen, that the basis of nitre alone, a combination of azote with a small portion of oxygen, remains behind, which, by the free caloric, then present, acquires the elastic form.

In making similar experiments with the *concentrated* sulphuric acid, sulphurous gas escapes; on the contrary, hydrogenous gas, when it has been

diluted

diluted with water; and this for the following reaſon: in the former caſe, one part of the ſulphuric acid parts with much of its oxygen, hence ſulphurous acid muſt be the product; this, however, in the ſecond caſe, meets in the water a body, from which, on account of its greater power of attraction, it derives as much oxygen as it had been deprived of by the metal; conſequently, as the water is compoſed of oxygen and hydrogen, the latter muſt naturally become free, and diſengage itſelf in a gaſeous form.

Farina, mucilage, gum, ſugar, are educts, rather than products, which are ſeparated from vegetable bodies, either by the operations of nature, or by ſimple chemical proceſſes. All theſe are combinations of *carbon* and *hydrogen*, in different proportions, with a portion of *oxygen*. They readily aſſume the nature of an acid, particularly when they meet with an opportunity of attracting a large portion of oxygen; on which account, all ſubſtances, capable of being converted into acids, are generally termed *acidifiable baſes*. This combination with oxygen may be accompliſhed, either by employing an acid which contains this element but looſely combined, as for inſtance, the nitric acid, or by means of fermentation.

The former of theſe operations is very ſimple, and conſiſts merely in immerſing the acidifiable ſubſtance in nitric acid, till ſuch time as red fumes are no longer expelled. The nitric acid is thus completely decompoſed; it is deprived of the greateſt part of its oxygen, and compelled to eſcape in the elaſtic form of nitrous gas. The ſubſtance ſubjected to ſolution, on the contrary, abſorbs its oxygen, and is transformed into an acid.

All *vegetable acids* have ſimilar baſes, namely, *carbon* and *hydrogen*. The whole and only difference ſubſiſting between them, depends upon the *relative* and *different* quantity of the oxygen by which they are acidified. The *acetous acid* is the moſt perfect among them, and all others are, in part, changed into it, by a more perfect ſaturation with oxygen. Some acids of the vegetable kingdom, however, likewiſe contain azote and phoſphorus; but whether theſe two are eſſential ingredients of them, has not yet been aſcertained.

If vegetable ſubſtances, containing farinacious, mucilaginous, and ſaccharine ingredients, are expoſed to a temperature above 10° of Reaumur, or $54\frac{1}{2}$° of Fahrenheit, the equilibrium ſubſiſting between their conſtituent parts is thus deſtroyed. Theſe are now ſet at liberty to enter into new combinations. A great part of the free carbon unites with oxygen, and eſcapes as carbonic acid; the hydrogen, however, in combination with another part of carbon and oxygen, produces alkohol, or an inflammable ſpirit. This is called, in chemical language, the firſt, or vinous fermentation. Alkohol, being an acidifiable body, then combines

not

not only with the portion of oxygen ſtill exiſting in the mixture, but it likewiſe attracts ſo much of it from the atmoſphere, that, after being changed into an acid, it appears in the form of vinegar. Theſe are the limits of the ſecond ſtage of fermentation. Laſtly, in the third ſtage, hydrogen is diſengaged; and, if azote be one of the conſtituents in the ſubſtance under experiment, the product is *ammonia*, which derives its origin from the baſes of *hydrogen* and *azote*. Theſe ſucceſſive productions take place till the whole vegetable body is reduced to its earthy baſis, and the more ſolid inſoluble ſalts. Every organic ſubſtance, however, does not exhibit theſe phenomena, during its fermentation. Several plants afford no alkohol, while animal ſubſtances yield neither this nor an acid. Thoſe of the former kind immediately paſs over into the acetous, and the latter, into the fetid, or putrefacted fermentation.

In reviewing the different methods by which oxygen forms combinations, it is evident that it is *excluſively this elementary ſubſtance* that *forms the acids*, and transforms or changes all ſuch ſubſtances into acids, as are capable of receiving it in conſiderable quantity. Although the baſes of ſome of the acids, for inſtance the *muriatic fluoric (fluor-ſpathic)* and *coracic*, are hitherto *unknown*, yet reaſon and analogy intitle us to conclude, with a high degree of probability, that they, like all others, have individual baſes which from the oxygen have acquired their acid nature, but which cannot be exhibited in a ſeparate ſtate, becauſe their affinity to oxygen is ſo great, that they cannot be attached to any other ſubſtance. The capacity of the muriatic acid to abſorb an additional portion of this ſubſtance, and to form what is called ſuperſaturated or oxygenated (dephlogiſticated) muriatic acid, affords an obvious confirmation of this conjecture.

It is further obſervable, that *metals* aſſume the form of calces or oxydes, only when they enter into combination with oxygen. In that combination alone they belong to the claſs of *compound* bodies; whereas, in their *metallic* ſtate, we are unable to decompoſe them, and therefore muſt conſider them as *ſimple* bodies. Laſtly, it follows that *water* conſiſts of *hydrogen* and *oxygen*, and as ſuch cannot be called a ſimple body.

But theſe propoſitions are not merely ſynthetically true; they can be verified alſo by a ſtrict analyſis. As oxygen muſt be neceſſarily ſubject to the laws of chemical affinity, all its combinations muſt be liable to be diſſolved, and the reſpective bodies with which they were formed, to be reduced to their priſtine ſtate; as ſoon as, under the requiſite conditions, another body operates upon them, whoſe elective attraction for oxygen is greater than that which attaches or fixes it to their baſis. In moſt inſtances, pure

pure carbon is a ſubſtance of this nature. In a *high* temperature, by the degree of which the elective attractions in general are very much influenced, carbon deprives the acids of their oxygen, appears in the form of carbonic acid, and completely diſengages their baſes; for inſtance, the ſulphur from the ſulphuric acid; the phoſphorus from the phoſphoric acid, &c. It *decompoſes water,* if it be made to paſs over it in the form of vapour conducted through red-hot tubes; combines with the oxygen of it, and thus diſengages the hydrogen. It *reduces* the metallic oxydes when at the degree of fuſion, and reſtores to them their metallic properties. Some of theſe oxydes, however, thoſe of the *precious metals,* and of *mercury,* do not ſtand in need of carbon to diſengage their oxygen. They readily part with it, in a temperature ſomewhat higher than that in which they have abſorbed it; becauſe in this the affinity of oxygen to caloric is greater than to the baſis of the metal; it eſcapes in the form of oxygenous gas, and may be eaſily intercepted, incloſed in glaſs or other air proof veſſels, and exhibited to the ſenſes.

In an analogous manner, as bodies in their combination with oxygen acquire additional weight, they, in the contrary caſe, when diſoxygenated, or deprived of their acidity, loſe a part of their abſolute weight. This loſs, however, can be as eaſily accounted for as the former increaſe; it originates in the eſcape of the oxygen, and its relative amount is, in every inſtance, proportionate to the weight of the latter.

Thoſe readers who have not yet acquired a familiar knowledge of the antiphlogiſtic ſyſtem, will be enabled from this ſhort ſketch, to form, at leaſt, a ſuperficial eſtimate of its merits. The firſt and original works, which appeared on this ſubject, are the two following; 1. "*Opuſcules phyſiques et chymiques, par Lavoiſier:*" à Paris; Tom i. ii. 8vo. 1774; and, 2. "*Traité elementaire de chimie, par Lavoiſier:*" à Paris; 8vo. 1789.

Having now briefly delineated the elements of the modern French ſyſtem of chemiſtry, it remains to ſtate, conciſely, the various modifications which this ſyſtem has lately undergone in Germany, or rather, to ſketch an outline of the latter ſyſtems to which it has given birth.

Profeſſor Voigt, of Jena, ſome years ago, publiſhed a new chemical theory, which remarkably deviated from the former phlogiſtic, as well as the preſent antiphlogiſtic ſyſtem.*

* *Verſuch einer neun Theorie, &c.* i. e. *An attempt towards eſtabliſhing a new theory of fire, of combuſtion, of the different gaſes, of reſpiration, fermentation, electricity, of the meteors, of light and magnetiſm:* by Profeſſor Voigt, Jena, 8vo. 1794.

The learned Profeſſor adopts *two* kinds of phlogiſtic, or *inflammable ſubſtances*, viz. *male* and *female*; which, however, are not cognizable by our ſcales or inſtruments of menſuration. The former exiſts in all *combuſtible* bodies of the animal and vegetable kingdoms, in *ſulphur*, *phoſphorus*, and the *metals*; it forms with *water* the *male inflammable gas* (inflammable air; hydrogen gas); the latter, when combined with water, exhibits the *female inflammable gas* (pure vital air; oxygen gas), and, as ſuch, conſtitutes the fourth part of atmoſpheric air.

The remaining part of the atmoſphere (phlogiſtic air; azote) is an *elementary air*, which cannot be condenſed into a fluid vapour; it is neither fit for reſpiration nor combuſtion, but is capable of diſſolving a variety of ſubſtances.

Light is an extremely ſubtle matter, every where extended, which, however, can ſenſibly affect the eye only, when its parts ſuſtain a violent degree of vibration.

The *acids* are formed by a peculiar *acidifying baſis*, which exiſts in all bodies affording acids, but which is *concealed* in them by means of the male baſe of inflammability; as, for example, in phoſphorus, in ſulphur, in the carbon, &c.

In a ſimilar manner, a peculiar *alkaline baſis* produces the *alkaline ſalts*, which, according to its different modifications, are at one time *fixed*, and at another *volatile*.

Water is an *elementary* ſubſtance, which, indeed, can be *ſeparated*, by means of combuſtion, from the male and female baſes of inflammability, and again combined with theſe baſes, according to particular circumſtances, but it cannot be *decompoſed* into its conſtituent parts.

Carbon is formed of the *aërial acid*, and the *male baſis of inflammability*. The former is a ſubſtance that is indebted to the acidifying element for its origin, which *cannot be decompoſed*, and which, in its gaſeous ſtate, is combined with a portion of water.

The different *earths* we meet with in nature, are modifications of one and the ſame ſimple ſubſtance, the *baſis of earth*.

If an inflammable body come in contact with the female inflammable gas, and if by any ſpecies of vibration, for inſtance by friction, the male inflammable baſe of the former be kindled, there takes place a *reciprocal action* between the two inflammable baſes; they unite; and if this copulation (or as Profeſſor Voigt expreſſes himſelf, this grinding and milling operation of their nuptials be *calmly* accompliſhed), *heat* or *actively combined*

bined inflammable matter, is the result. And if the reciprocal concussion of the two principles be attended with *violence*, the *matter of heat* is at the same time disengaged, and *fire* is consequently produced.

The inflammable base, thus actively combined, at length passes over into a *calm* state, and is dissolved by the *simple* air of the atmosphere. The product of this solution is called inflammable air (phlogisticated air; azote.)

All bodies which are deprived of their male basis of inflammability, acquire an addition of weight, and new properties. The acids, for instance those of phosphorus, of sulphur, become free; the metals are reduced to the form of calces. Their male base of inflammability combines with the female, emanated from the female inflammable gas; thus the water of the latter is disengaged, which attaches itself to the body subject to combustion, and must therefore, necessarily increase its absolute weight.

As soon, however, as such bodies, for instance calciform metals, the phosphoric acid, &c. meet with an opportunity of depriving another substance, such as the carbon, of its male inflammable base, according to the fixed laws of affinity, they again return to their former state, the phosphoric to the phosphorus, the metallic calces to bright metals, &c. The water they have absorbed, combines, in this case, with the carbonic acid, disengaged from the carbon, and escapes in the form of gas. As, however, the water was the only cause of their increased weight, the male principle of inflammability, which they exchanged in return, does not manifest any sensible weight, it is obvious that such bodies must be reduced to that weight which they possessed previous to their combustion.

In an analogous manner, the author adopts the sexual system in the doctrines of electricity and magnetism: he calls the two opposite magnetic poles, as well as the *plus* and *minus* in electricity, by the fanciful terms of *male* and *female*.

Less artfully constructed, more consistent, and incomparably better adapted to explain the phenomena of nature, is the system lately proposed by the celebrated chemist of Prussia, Dr. RICHTER, whose works are well known to the learned of France, as well as of Britain.

(To be continued in our next Number.)

HINTS

HINTS AND IMPROVEMENTS

IN THE PRACTICE OF

MEDICINE AND SURGERY.

Propoſal for improving the Practice of Medicine, by the Introduction of Clinical Tables.

It is a remark, which cannot be too frequently and ſeriouſly repeated, that the greater number of errors and controverſies in medical practice, have ariſen from the ſuperficial and inaccurate mode of making *clinical obſervations.* If ſuch were not deplorably the caſe, the medical world would not at preſent groan under a burthen of confuſed deſcriptions of diſeaſes, and not unfrequently, miſrepreſented facts, whether proceeding from the inadvertency or pathological ignorance of the obſerver.

Much has lately been done in various parts of Europe, to remedy theſe eſſential defects, which have hitherto particularly diſgraced the French and German ſchools. While the former are amuſing themſelves in framing new ſyſtems of pathology, founded upon the chemical combination of the elaſtic fluids, or gaſes, decompoſed in the analyſis of animal ſubſtances; the latter have adopted the more Hippocratical method of examining the intricate labyrinth of diſordered action in the human ſyſtem, by following the learned Bacon's incomparable plan of judging from actual experience only, and proceeding from a ſufficient number of particular facts, to form general concluſions, by way of *rational induction.*

From the correſponding accounts reſpecting the preſent ſtate of different medical ſchools in Germany, we can with confidence aſſert, that the method of enquiry we allude to, eſpecially prevails in the univerſities of *Jena, Goettingen, Vienna, Bamberg, Wurzberg,* &c. The late publications of Dietz, Gruner, Gotthard, and Vogel on, *Symptomatology,* or the moſt proper method of examining patients, and aſcertaining the cauſes of diſeaſe, have in this reſpect, nearly accompliſhed a revolution. To gratify the curioſity of the Britiſh reader, we have judged it equally neceſſary and uſeful, to communicate a ſpecimen of the Table now actually uſed, in moſt of the hoſpitals, as well as by many private practitioners in Germany. We ſhall not attempt to point out the practical advantages of ſuch Tables if accurately attended to; as the utility of them, in review-

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ing the progreſs and ſymptoms of the diſeaſe under treatment is ſo evident, that it can be doubted and vilified by thoſe only; who are either paſſionately averſe to all innovations, or who reject every improvement coming from others, and attended with a degree of trouble and attention.

Artificial Muſk, in the Hooping-Cough.

PROFESSOR HUFELAND, of Jena, an eminent and ſucceſsful practitioner, ſtrongly recommends the uſe of muſk, particularly that which is artificially prepared, in the epidemic hooping-cough. He affirms, that this ſubſtance, after the proper emetics and reſolvents had been premiſed, poſſeſſes the power of volatilizing the more ſubtile acrimonious humours*, and expelling them through the pores of the ſkin. This remedy, although invented by the celebrated chemiſt, MARGGRAF, many years ago, and ſanctioned by the great authorities of VAN SWIETEN, and STOELLER, appears to be little, if at all, known or employed in this country. As it is a medicine comparatively cheap, and eaſily procured, we ſhall communicate to our readers the following approved method of preparing it.

Three drachms and a half of concentrated nitric acid are gradually dropped on one drachm of rectified oil of amber, which is previouſly poured into a wine glaſs. When this mixture is agitated, it grows hot and emits offenſive fumes, againſt the inhalation of which the operator muſt be on his guard. After having ſtood twenty-four hours, the compound acquires a reſinous appearance; at the bottom of it we find a ſtrongly acid fluid, but on the top of it a yellow reſin, reſembling muſk in its fragrance. This reſinous matter muſt be repeatedly waſhed, firſt in cold and then in hot water, until the acid taſte be completely removed. Thus we obtain a ſubſtance which is equal in flavour, as well as in its medicinal properties, to the genuine natural muſk, which is perfectly ſoluble in ſpirit of wine, which, like other reſins, can be precipitated by water, and which always retains the ſcent acquired by this ſimple chemical proceſs.

According to Dr. HUFELAND's experience, the artificial muſk has been found of eminent ſervice in the hooping-cough, as well as in all kinds of nervous diſeaſes. Indeed, the oil of amber combined with the nitric acid, might lead us, a *priori*, to conclude their uncommon efficacy in nervous and

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* We apprehend this aſſertion will excite a ſmile in thoſe opponents of *humoral pathology*, who fondly aſcribe *every* inordinate action in the ſyſtem to ſome preternatural ſtate of the nervous and muſcular fibres. W.

and ſpaſmodic affection. As this ſubſtance is of a waxy and reſinous conſiſtence, it is moſt conveniently adminiſtered in the form of emulſions. For this purpoſe, from ten to twelve grains are triturated in a mortar with a few almonds, and diluted with five or ſix ounces of water. Of this mixture, two tea-ſpoonsful are given every two hours, to a child from one to two years of age, and in a riſing proportion to older children. Many patients have received a cure from the uſe of this remedy, and a few occaſional emetics, without the aid of any other medicine. It generally produced a ſudorific effect, while it obviouſly diminiſhed and alleviated the fits of coughing; and not unfrequently it was attended with eruptions, which, in many inſtances, aſſumed the form of the true nettle-raſh; and by this favourable criſis, ſoon terminated the diſeaſe.

New Method of preventing Asphyxia in Children.

THE *Medico-chirurgical Journal* of Profeſſor TODE, Vol. II. No. III, publiſhed in German, at *Copenhagen*, announces an important diſcovery in the art of midwifery. M. HERHOLDT has found, on opening the bodies of animals ſtill-born, that the cavity of the tympanum is filled with the *liquor amnii* and phlegm (viſcous water); that the fluid is ejected after birth through the ſinus auditorius, and replaced by atmoſpheric air. This diſcovery has induced him to ſuppoſe, that the liquor amnii is likewiſe introduced into the trachea, and fills it ſo entirely, as to prevent the infant from breathing when born. Experiments made at the Veterinary School have confirmed this hypotheſis. Generally, Nature, by her own efforts, diſcharges this liquor; ſometimes, however, ſhe requires the aſſiſtance of art. The child cannot reſpire freely, till it be thus relieved. Mr. Herholdt is of opinion, that this circumſtance produces more apparent deaths than is commonly imagined. It is not then enough to rinſe the throat of the child, but it ought to be placed in an attitude which facilitates the diſcharge of the liquor. The author has been ſo fortunate, in the courſe of laſt year, as to reſtore to life twelve out of thirteen children in this ſituation. Profeſſors ABILDGAARD and WIBORG have confirmed the experiment, by opening five puppies in embryo.

Medicines ſucceſsfully employed in Epilepſy.

THIS formidable diſeaſe, againſt which innumerable remedies have hitherto been uſed, with little or no ſucceſs, ſeems at length, in a conſiderable variety of inſtances, to have yielded to medical treatment.

Much

Much as we deprecate the idea of curing diſeaſes ariſing from *different* cauſes, by *ſimilar* remedies, we ſhould conſider ourſelves deficient in candour and juſtice, were we to withhold communications from the medical public, merely becauſe they are not always derived from *profeſſional* ſources, or recommended by high authorities. Such is the caſe with reſpect to the firſt remedy we propoſe to deſcribe.

There is, at preſent, a remedy much in vogue on the Continent, particularly in Germany, which is known by the name of '*Ragolo's Epileptic Powders.*' They have been lately analyſed by phyſicians of the firſt eminence, and preſcribed with uncommon ſucceſs, in ſeveral very obſtinate caſes of epilepſy. This remedy was originally invented by *Meldola*, a Spaniard, who eſtabliſhed its celebrity, by curing a Portugueſe lady of high rank. In conſequence of this event, the Court of Spain enjoined Dr. Ragolo to try its effects; and, as this mercenary gentleman had not a ſufficient ſhare of liberality to make the compoſition of it known to the public at large, he ſold it to a medical perſon in Germany, of an equally narrow mind, who is now carrying on with it a very lucrative traffic.*

According to the conjectures of Cnope, who has chemically analyſed Ragolo's powders, and communicated the reſult in *Baldinger's Magazine*, Vol. xi. p. 232, they conſiſt of a mixture of valerian, orange-peel, ſal ammoniac, and cajeput oil. Profeſſor Gmelin, of Gottingen, gives a ſimilar opinion in *Crell's Annals of Chemiſtry*, No. 12, for 1793; although it is ſuppoſed by others, that they are principally compoſed of the toadſtool *(lycoperdon boviſta, Lin)*, valerian, and ſome other diſtilled oil; for it is well known, from thirty ſucceſsful caſes mentioned in the *Univerſal Literary Gazette of Jena*,' No. 245, for 1793, that the lycoperdon operates almoſt as a ſpecific in epileptic fits, particularly thoſe ariſing from ſudden dread or terror. The formula in which Drs. Baldinger and Gmelin have preſcribed theſe powders, is nearly as follows: powder of the valerian root, half a drachm; magneſia alba, and ſal ammoniac, each ſix grains; and cajeput oil three drops—to be taken for a doſe. To ſecure the deſired effect, we would recommend to add a grain or two of the duſt of the lycoperdon, to each doſe, and gradually to increaſe the quantity of the laſt article.

Dr.

* They are now ſold by a Mr. Pfluger, of Nurenberg, in ſmall boxes, at the enormous price of THREE GUINEAS each! Thus it appears, that we are not *ſingular* in ſuffering a traffic to be carried on, which is rather encouraged than oppoſed, by thoſe who ought to guard the unwary againſt fraudulent practices, inſtead of giving ſuch impoſitions an apparent ſanction by public and private documents. W.

Dr. THIELEMANN, a respectable practitioner in Germany, cured, by means of these powders, in the course of six weeks, a youth who had for three years been afflicted with epileptic fits: and Dr. DOLLE likewise, within a few weeks, restored to society a young woman, who for eighteen months had been subject to attacks of epilepsy. Dr. JAHN, however, another German physician, affirms that he has found them of no service.

Dr. GESENIUS, of Nordhausen, observes in one of his latest publications, that in those cases of epilepsy which arise from acrimonious humours, and a preternatural degree of sensibility and irritability in the nervous system, he has successfully prescribed the misseltoe *(viscus albus, Lin.)* He administers it, as COLBATCH did, in the form of powders, three times a day, half a drachm each dose; at the same time he directs the patient to drink plentifully of an infusion made of four ounces of misseltoe, cut small; a handful of peony flowers; and two ounces of syrup of peony, or yellow roses.

From a letter of Dr. CAPPE, a promising young practitioner at York, addressed to Dr. DUNCAN, jun. of Edinburgh*, we extract the following facts relative to the internal use of the *nitrate of silver*. Dr. Cappe gave this medicine to a man who had been renewedly attacked with epilepsy soon after his marriage. The effects of it were greater than could reasonably have been expected; as the patient had suffered from the disease for more than twenty-five years. For a long time there had not been an interval of more than ten days between his fits. He began to use the medicine on the day after he had many fits. He took a quarter of a grain thrice a day, and had no fit for a month. After this he enjoyed an interval of five weeks; and though the intervals became gradually longer, Dr. Cappe could not ascertain that his fits were less violent.

In the same letter, Dr. Cappe takes notice of a paper read by Dr. SIMS before the Medical Society of London, on the use of the *nitrate of silver in epilepsy*, in which paper Dr. Sims mentions, that it sometimes aggravated the disease at first, though it afterwards effected a complete cure. Dr. Cappe remarks, however, that he had not observed such an effect; though he had seen this substance used, particularly at the Carey-street Dispensary, in London, in many epileptic cases, with more or less advantage.

After having informed us, that he had also prescribed the nitrate of silver in one case of *angina pectoris*, in which it removed all the symptoms; in two

* *Dr. Duncan's Annals of Medicine* for 1798, p. 456, and following.

two cases of *dyspnœa,* where it had a powerful and speedy effect; and in one case of *hysteria,* with some apparent benefit. Dr. Cappe accompanies these facts with the following useful remarks: "This medicine, in general, keeps the bowels open; it sometimes produces diarrhœa, but it has not occasioned any painful effect in the cases under my observation, though given in the quantity of half a grain three times a day. The effect of it (proceeds Dr. Cappe), in the case I have mentioned, cannot, I think, be attributed to its aperient operation: for in the case of angina pectoris, it was frequently necessary to give aloetic pills, to prevent costiveness. No other remedies were employed with the nitrate of silver, except in the case of hysteria. In this instance it was necessary to unite opium with it, to prevent its purgative effects."

To conclude these important accounts relating to a disease of so obstinate and frequently complicated a nature, we shall only observe, that it appears to us of the first consequence to discover, if possible, the proximate and predisposing causes of epilepsy. The latter are perhaps so hidden in the pathology of the human mind and body, as not to be easily traced to their true source and origin: but the proximate causes have certainly not been hitherto sufficiently attended to. It is well known to experienced practitioners, that the epileptic convulsions, so common in early youth and infancy, not unfrequently proceed from some material stimulas, such as worms in the intestines, and particularly the *tape-worm,* without accounting for it from preternatural irritability, or indirect debility of the muscular or nervous fibres. Several ingenious methods of discovering this worm, which plays so decided a part in the diseases of children, have lately been devised, and not altogether without success. Dr. Sachse, of Parchim, in the duchy of Mecklenburg, has observed, that a patient under his treatment for the tape-worm, regularly discharged long pieces of it in the morning, after she had eaten a small quantity of strawberries at night. This lady remarked the same phenomenon to recur a twelvemonth after she had first taken notice of this singular fact, which seems to claim the attention of practitioners. There is however nothing mysterious or extraordinary in this phenomenon. Strawberries, like all other vegetable substances which contain much water,* evolve large quantities of fixed air, or carbonic acid gas, in the bowels of animals; and, as

* While I was writing this article, a gentleman of sufficient respectability to vouch for the truth of the following fact, informed me, that a poor woman at Islington had preserved two long pieces of a tape-worm, the whole of which was expelled by the use of a simple decoction of carrots in water, which she had drank for a considerable length of time, in large quantities.

as this ſpecies of gas is of a highly deleterious and irreſpirable nature, we need not wonder, that the eating of ſtrawberries produced this uncommon effect. The want of ſtrawberries, in this inſtance, might be very effectually ſupplied by employing the following mixtures: diſſolve two drachms of ſalt of tartar in twelve ounces of water; and dilute four ounces of the acid of lemons in twenty ounces of water; each ſolution to be kept in ſeparate bottles. Of the former mixture, the patient takes firſt half a tea-cupful, and immediately after it a whole tea-cupful of the latter. Theſe draughts ſhould be repeated every hour or two, till the tape-worm moves: now it becomes neceſſary to adminiſter ſtrong cathartics, ſuch as either jalap, ſcammonium, or aloes, with a proportionate addition of calomel, to accelerate the operation. This method will in general, be found more certain in expelling that harraſſing worm than any of the ſpecifics, not even the infuſion of carrots, or the powder of the male fern-root, excepted.

The ingenious and ſucceſsful experiments lately made by Dr. FRICKE, of Brunſwick, to diſcover and deſtroy the tape-worm by means of electricity, we are obliged, for want of room, to defer to our next Number.

On the Treatment of inveterate Ulcers.

THE frequent failure in the attempt of curing ulcers, of the lower extremities in particular, has by many been conſidered as an opprobrium to the faculty. Thoſe who are unacquainted with the laws of the animal economy, as well as with the difficulties which medical practitioners experience, in aſcertaining the origin or cauſe of diſeaſes among patients of a certain deſcription, will not paſs ſo haſty a judgment.

About ſix years ago, Mr. FRAHM, a ſurgeon, in the Daniſh dominions, publiſhed a treatiſe in which he recommended the cure of old ulcers of the legs, by exciting an artificial inflammation round the parts affected, by means of turpentine or other ſtimulating plaſters, keeping thoſe parts properly ſecured by bandages, and the ulcers regularly dreſſed with ſimple ointments, till nature, with the aſſiſtance of the neceſſary internal remedies, according to the circumſtances of the caſe, recovers ſufficient tone and ſtrength to heal the enlarged ulcers. Another method equally rational has been lately ſuggeſted by Mr. BAYNTON, of Briſtol, in his "*Deſcriptive Account of a new Method of treating old Ulcers of the Legs.*" *8vo. Briſtol*, 1797. He aſſerts that the means propoſed by him will, in moſt inſtances, be found ſufficient to accompliſh cures in the worſt caſes, without pain or confinement. After having been repeatedly diſappointed in the cure of old ulcers, Mr. Baynton determined on *bringing the edges of old ulcers nearer together by means of*

ſlips

ſlips of adheſive plaſters. To this he was chiefly led, from having frequently obſerved, that the probability of an ulcer continuing ſound, depended much on the ſize of the cicatrix which remained after the cure appeared to be accompliſhed; and from well knowing, that the true ſkin was a much more ſubſtantial ſupport and defence, as well as a better covering, than the frail one which is obtained by the aſſiſtance of art. But, when he had recourſe to the adheſive plaſter, with a view to leſſen the probability of thoſe ulcers breaking out again, he little expected, that an application ſo ſimple would prove the eaſieſt, moſt efficacious, and moſt agreeable means of treating ulcers.

Although the firſt caſes, in which Mr. Baynton tried this practice, were of an unfavourable nature, yet he had ſoon the ſatisfaction to perceive that it occaſioned very little pain, and materially accelerated the cure, while the ſize of the cicatrices were much leſs than they would have been, had the cures been obtained by any of the common methods.

At firſt, however, the ſucceſs was not quite perfect; as in many inſtances he was not able to remove the ſlips of plaſter, without removing ſome portion of the adjacent ſkin, which, by occaſioning a new wound, proved a diſagreeable circumſtance, in a part ſo diſpoſed to inflame and ulcerate, as in the vicinity of an old ſore. He therefore endeavoured to obviate that inconvenience by keeping the plaſters and bandages well moiſtened with ſpring-water, for ſome time, before they were removed from the limb. He had ſoon the ſatisfaction to obſerve, that the inconvenience was not only prevented, but that every ſucceeding caſe juſtified the confidence he now began to place in the remedy. He alſo diſcovered, that moiſtening the bandages was attended with advantages which he did not expect: while the parts were wet and cool, the patients were much more comfortable in their ſenſations, and the ſurrounding inflammation was ſooner removed than he had before obſerved it to be.

By the mode of treatment here recommended, Mr. Baynton found, that the diſcharge was leſſened, the offenſive ſmell removed, and the pain abated in a very ſhort time. But, beſides theſe advantages, he alſo found, that the callous edges were in a few days level with the ſurface of the ſore; that the growth of fungus was prevented, and the neceſſity of applying painful eſcharotics much leſſened, if not entirely done away. Mr. Baynton very properly gives a minute deſcription of the method which he would recommend, of treating ſuch ulcers in their different ſtages; but, for theſe uſeful particulars, we refer the reader to the abovementioned treatiſe.

Among the internal remedies that have been lately propoſed, and often employed with ſucceſs by phyſicians on the Continent, is the extract of the

wild

wild hyſop *(gratiola officinalis, Linn.)*; by which, according to the account given by Dr. WENDT,* four perſons have been cured of inveterate ulcers of the legs, attended with a diſcharge of ichorous matter. Dr. Wendt, however, adds, that patients ſubject to hæmorrhages, particularly women during menſtruation, ought, under theſe circumſtances, to abſtain from the uſe of this extract; and others of a cachectic diſpoſition, which is generally prevalent in theſe complaints, ſhould take it at night only; for, if uſed in the morning, it is apt to occaſion violent purging and vomiting. The moſt proper method of adminiſtering it, is that of diluting two drachms of the extract of gratiola (which is eaſily prepared by inſpiſſating a ſtrong decoction of the flowers of the hyſop to the conſiſtence of a thick ſyrup) with four ounces of water, and directing the patient to take at firſt one table-ſpoonful at night, to increaſe the doſe gradually to two table-ſpoonfuls; and then to begin likewiſe to take a ſpoonful of this draught every morning. In that ſtage of pulmonary conſumption which ariſes from the abſorption of pus from large ſuppurating ulcers, and the ſubſequent hectic fever, it is confidently affirmed, that the prudent uſe of the extract of gratiola has frequently afforded unexpected relief, when there was was little hope of the patient's recovery.

Although we are no advocates for the application of external remedies in caſes of inveterate ulcers, being firmly perſuaded, that the nature of malignant ſores cannot be changed by external applications alone, yet we may be allowed here to ſpeak from our own experience, that a weak ſolution of the *nitrate of ſilver*, in the proportion of one grain to two ounces of water, is perhaps the moſt efficacious lotion that can be recommended with ſafety, to correct and check the diſcharge of fetid and putrid ſanies from deep-ſeated ulcers.

Another external remedy in ulcerations of the legs we learn from a late account communicated by Dr. FILTER to Dr. GESENIUS, who has inſerted it in his excellent "*Manual of Therapeutics*," 2d edition, 8vo. Stendal, 1796, in German: and as this remarkable fact is as yet little known in this country, we ſhall here give a tranſlation of Dr. Filter's report, nearly in his own words:—"I have (ſays this excellent phyſician), in two caſes of inveterate ulcers of the legs, made uſe of the *Anguſtura bark*. The firſt caſe was that of a lady who had long paſſed the period of menſtruation, and, for many years, had been afflicted with arthritic pains. The ulcer, which had continued open for ſeveral months, and began to extend rapidly, was completely cured by

* Vide his "Accounts of the Progreſs of the Clinical Inſtitution at Erlang." Number VI. publiſhed about the year 1794.

cured by means of frequent fomentation, with a decoction of this bark. In a ſimilar caſe of a woman, whoſe menſtruation was ſuppreſſed, I directed to duſt the fetid, ichorous ulcer on the lower part of the thigh with the powder of Anguſtura bark, which not only produced more favourable pus in the courſe of a few days, but likewiſe performed a complete cure within a few weeks; without having preſcribed, either in this, or in the preceding caſe, *any internal remedies*, which might have had a particular effect in contributing to the ſpeedy cure of the patients."

To conclude this article, we ſhall take notice of a work which appeared ſome time ago on the treatment of ulcers, but which does not mention either the uſe of Gratiola or Anguſtura bark; though, in other reſpects, it is replete with uſeful practical remarks, and ingenious theoretical ſpeculations; viz. '*A Prize Eſſay on the beſt method of treating inveterate ulcers of the lower extremities:*' by F. X. MEZLER, 4to. Vienna, 1792. In a future number we propoſe to furniſh our readers with a conciſe abſtract of this claſſical treatiſe.

Venereal Chancres cured by Alkalies.

DR. MITCHILL, of New-York, informs us, in the American "*Medical Repoſitory*," Vol. II. Numb. II. that venereal ulcerations have been removed with ſurpriſing quickneſs, by the local application of the common vegetable fixed alkali, or the carbonate of pot-aſh. A ſucceſsful and concluſive experiment has been made by that ingenious Profeſſor, which (in his own words) "may ſerve to confirm the doubts of ſuch gentlemen who diſbelieve the wonders ſaid to be wrought by the nitric acid, and, at the ſame time, to give new matter of reflection to thoſe who have aſcribed to it ſomething like a ſpecific mode of action.—A gentleman, a few days after impure coition, felt an itching on the præputium, which ſoon became ulcerated. As ſoon as the chancre was diſcovered, it was cauterized with the lunar cauſtic, and dreſſed with ointment ſtrongly impregnated with the red precipitate of mercury.

"Notwithſtanding repeated dreſſings, and the ſtricteſt obſervance of cleanlineſs in all reſpects, the ulcer continued to ſpread, and had invaded a conſiderable ſpace on the prepuce. Finding it yield in no degree to theſe local applications, recourſe was had to mercurial frictions, which were performed by rubbing the blue ointment in conſiderable quantities on the legs and thighs. Before a ſalivation came on, the appearance of the ulcer mended, and by degrees it healed. A few days after, the ſame gentleman

gentleman having repeated his impure careſſes, was troubled with a new chancre, cauſed, apparently, from freſh poiſon breaking out near the frænum. Immediately on diſcovering it, while yet exceedingly ſmall, and not larger than to contain a pin's head, it was touched with lunar cauſtic, and dreſſed with precipitate ointment, as the former had been; and in a conſtitution now charged with mercury, it was expected a cure would be very eaſy and expeditious. This, however, was not the caſe. The chancre continued to enlarge, to inflame, and to become more and more troubleſome, inſomuch, that it was apprehended, there would be a neceſſity for repeating the mercurial friction.

"But before recourſe was had again to this tedious and troubleſome remedy, it occured to me, from the *analogy of volatile alkali in curing bites of venomous ſerpents, and of the fixed alkali and lime, in overcoming thoſe acid products of putrefaction, which poiſon the atmoſphere, and induce epidemic diſtempers,* that it was worth the while to try the effects of an *alkaline application,* to ſubdue the *virus of ſyphilis:* accordingly, the ulcerated ſurface was covered with ſome deliqueſcent ſalt of tartar. On being firſt applied, it excited ſevere ſmarting, which, however, laſted but a ſhort time. It was dreſſed with lint, and on examining it ſome hours afterwards, it looked better, and appeared to ſpread no more; after a ſecond application of pot-aſh, the appearance of the ulcer was apparently changed for the better; on a third application, it dried up, healed intirely, and has been well ever ſince.

"Whether, in this caſe, the pot aſh operated upon the ſolids, and introduced in them a new action, incompatible with the morbid action, or whether it produced its effects by neutralizing the contagious matter on the ſurface of the ſore, are queſtions which the phyſiologiſt may conſider and explain at his leiſure. This experiment ſhows, at leaſt, that there is nothing ſpecific in the action, either of mercury or of nitrous acid, on venereal ulcers. Abundance of inſtances of chancres cured by alkali, have ſince occurred in the New-York Hoſpital.

Subſtitutes propoſed for the Peruvian Bark, in Intermittents.

OF the almoſt innumerable remedies which have, from time to time, been introduced and again relinquiſhed, in the cure of intermittents, the bark is the only one which has now, for upwards of a century, maintained its well-merited reputation. It cannot, however, be denied that there are many

many other valuable substances in nature, which, if they were properly and cautiously employed, would answer a similar purpose, and prevent the necessity of sending for this expensive foreign drug, as well as the frequent abuses to which it is now exposed, from its having among the vulgar acquired the character of a specific in agues, and from its indiscreet and promiscuous administration in every case of intermittent fevers, and to every patient, even although it appear to agree with the stomach. That much mischief may be and is daily done, in this respect, we shall endeavour clearly to prove in a future essay on this interesting subject. Let it suffice, at present, to point out those remedies which, since the time that Dr. Fowler first recommended solutions of arsenic in *regular* practice, have been employed with success by other respectable practitioners.

The first and most conspicuous of these, the avens root *(geum urbanum, Lin.)* which according to the experiment of Dr. Vogel (resident physician at Ratzeburg in Germany, physician to his Britannic Majesty, and son of the great nosologist), has lately cured three quartan agues, by directing half a drachm of the powder of this root to be taken, every hour through the day, and half a drachm of the Peruvian bark, with six grains of calomel in the morning. Thus, the most obstinate quartans, which had resisted the united virtues of the bark and other powerful febrifuges, yielded to the operation of the geum and calomel, *without exciting salivation*. It further deserves to be remarked, that the geum urbanum had long been employed by the country people in the vicinity of Eksjoe, in Denmark, before its effects were ascertained in regular practice.

The frequent and successful experiments made with this root, place the efficacy of it, in intermittents, beyond a shadow of doubt. It possesses great antiseptic and astringent powers, and at the same time moderates irritation; hence it proves so excellent a febrifuge. It may be used either in a spirituous infusion, by macerating eight ounces of the powdered root in sixteen ounces of proof-spirits, for two or three days, and directing an ounce of this infusion to be taken three or four times a day, in cold water, during the intermission of the fever; or in a decoction, by boiling one ounce of the dry root in 24 ounces of water down to sixteen ounces, and causing the patient to take two ounces of it, in the same manner as the preceding; or lastly, and with a greater prospect of success, the powder of the geum may be taken in substance, in repeated doses, as has already been stated. In this way, it is a safe and effectual remedy against the most obstinate agues, and well deserves a fair trial, in many other inveterate diseases, arising from inordinate action in the sanguiferous and nervous systems. The thick root, however, especially when collected in spring and autumn, is much preferable to the thin fibrous parts, which are so weak that they scarcely possess any virtue. The

uncommon

uncommon effects of this medicine ſtand further confirmed by the evidences of two other phyſicians at Kiel in Holſtein, Drs. Weber and Koch. They have ſucceſsfully employed it in no leſs than two hundred caſes of intermittents, and their teſtimony is confirmed by Murray, in his "*Apparatus Medicaminum*," vol. iii. who recommends much larger doſes—but the experience of other phyſicians is rather leſs favourable to the character of this extraordinary root.

The next remedy we ſhall mention, is that of the *Datiſca canniba* of Linnæus. This plant* has lately been exhibited by a conſiderable number of Italian phyſicians, with an unprecedented degree of ſucceſs. We ſhould not have ventured to number the datiſca among the ſubſtitutes for bark, had we not before us the authority of John Marsigly, the preſent Profeſſor of Botany in the Univerſity of Padua, who informs us, that it will ſtand the ſevereſt froſt, and requires no particular care; for the ſtem withers away in autumn, and the root again rapidly ſhoots new ſtalks in ſpring. It flowers about the end of May, and if ſeveral plants of both ſexes have been ſet near each other, they produce ſeeds which become ripe in Auguſt.

The ſtrong bitter taſte of this vegetable led the Profeſſor to ſuppoſe, that it poſſeſſed great antiſeptic and febrifuge virtues; hence he tried it, but with precaution, in a variety of caſes. The ſucceſs he met with far exceeded his expectations: and the ſubſequent trials made by one of his pupils, Dr. Quatteri, Profeſſor of Botany in Parma, and by Dr. Pincetti, Profeſſor of Surgery and Midwifery in the ſame Univerſity, fully confirmed his own conjectures and experiments. Similar accounts of the excellence of the datiſca, in intermittents, have been tranſmitted to Prof. Marſigly, by Dr. Zulatti, of Florence, Dr. Pontelli, of Udina, and Dr. De Rossi, of Oſſaro, the laſt of whom goes ſo far as to aſſert, that he directed a decoction of the leaves to be taken three ſucceeding mornings, in the quantity of four ounces each morning (not ſtating, however, whether in one, or ſeveral divided doſes); and that he found this decoction to be attended with the moſt favourable effects *in all periodical fevers.*

Marſigli has employed the freſh and dried leaves, as well as the root of the datiſca, in infuſions, decoctions, and powders, and the ſucceſs was uniformly

* For the botanical character of the *datiſca* we refer the reader to the work of Prosper Alpinus, '*De plantis exoticis*,' 301. Tab. 300, and 298, where he will find a deſcription of it under the reſpective names of *cannabis lutea sterilis*, and *cannabis lutea fertilis Contareni.*—Vesling, the ſucceſsor of Alpinus, and Morison, preſerved theſe names; though Turnefort called it, *cannabina Cretica florifera & fructifera.* It is not an eaſy conjecture, why Linnæus terms it the *datisca canabina.*

uniformly favourable. He alſo tried the bitter ſeeds of this plant reduced to fine powder, the reſult of which he ſent to Dr. Mingoni, reſident phyſician at the Bath of Abano, with a further view to aſcertain its medicinal properties. That practitioner gives the moſt ſatisfactory account of the antifebrile virtues of this powder, which he obſerved in four different caſes of obſtinate agues, after bark and many other medicines had been uſed with no effect; here he directed twelve grains to be taken for a doſe in the mornings. The firſt patient, in the fourth month of pregnancy, and during the whole time ſhe was afflicted with the ague, obtained relief from one doſe, which ſhe took on the day of intermiſſion, and vomited a yellow viſcid matter. On the day following, indeed, the fever returned, but for the laſt time. The ſecond patient was a woman thirty-four years of age, whoſe fever diſappeared on taking a ſimilar doſe of twelve grains, and after many critical evacuations by ſtool. The third was a boy ten years of age, much reduced, of a yellow complexion, impaired digeſtion, no appetite, and a very ſwollen belly. He likewiſe took twelve grains of the powder, vomited twice a quantity of viſcid, greeniſh matter, was liberated from the fever, his appetite and ſtrength returned, and he has now, for three months, enjoyed the moſt perfect ſtate of health. The fourth patient was a middle-aged woman, extremely reduced and emaciated by a tertian ague, without the leaſt appetite, and threatened with pulmonary conſumption. After taking one uſual doſe of this powder, the fever never returned, and ſhe is gradually recovering.

Profeſſor Marſigli very prudently avoids to account for the mode in which this plant operates on the human conſtitution, as we have not arrived at any ſuch certainty, in reſpect of the Peruvian bark and other medicines conſidered as limited ſpecifics. But beſides the incomparably lower price of the datiſca, it has another great advantage, that it may always be procured freſh, and in an unadulterated ſtate; that it does not, like the bark, induce oppreſſion of the ſtomach, obſtipation, &c.; that the firſt doſe is generally ſufficient to cure the ague, ſo that the ſecond and third ſeldom become neceſſary; and laſtly, that the paroxyſms of the fever ſuppreſſed by it rarely, if ever, return.

The immediate effect of this plant is manifeſtly on the organs of digeſtion, the inteſtinal canal, and the kidneys; hence it is an object to which the practitioner ought to direct his principal attention, to take an accurate and comprehenſive view of the particular conſtitution of his patient.

From the evacuating, diuretic, and alterative powers of the datiſca, we may reaſonably expect to derive conſiderable benefit in thoſe diſeaſes, where

 ſuch

ſuch changes are indicated.—Although the root is the bittereſt part of this plant, it is not the moſt active; as the leſs bitter ſeeds are far preferable.

The next ſubſtitute for the bark in agues, in point of efficacy and celebrity, is the bark of the willow, of which we ſhall mention ſix ſpecies, together with their reſpective virtues, according to the *comparative experiments* made with them and the Peruvian bark, particularly by Dr. Gunz, an accurate chemiſt in Germany. The *ſalix alba* contains as many volatile and gummy parts as the red bark, but leſs than the common pale bark; on the contrary, it contains more reſinous and leſs earthy particles than either: in the *ſalix pertendra*, the proportion of the former is greater, that of the latter ſmaller, than in both ſpecies of the Peruvian; the *ſalix fragilis* has more volatile parts than the red, and leſs than the common bark, but leſs earthy, and more gummy and reſinous parts than either; the *ſalix caprea* exhibits more reſinous and leſs earthy parts than either; but, as many gummy as the red, and leſs of theſe than the common bark; the *ſalix vitellina* yields more reſin and leſs earth than either, the ſame quantity of gum as the common, and more than the red bark; the *ſalix amygdalina*, more gum and reſin, but leſs earth than either, more volatile parts than the common, and not leſs than the red bark.

In ſuch caſes, therefore, where, according to the doctrines of humoral pathology, the fluids require to be inſpiſſated, the bile improved, and the vital powers raiſed, the bark of the ſalix vitellina and alba is, according to the experience of Dr. Gunz, much preferable to the other ſpecies. The ſalix fragilis he particularly recommends for external applications; and of the ſame opinion is Dr. Loffler, in "Richter's *Chirurgical Library*," Vol. VII. p. 789, where this ſpecies of bark is uniformly recommended in preference to the Peruvian. The ſame phyſician has, with great advantage, employed this ſubſtance, in the year 1772, in a malignant epidemic fever of a putrid form, then prevailing.—In hæmorrhages, he obſerved all kinds of the willow bark to produce ſalutary effects. In caſes of nervous debility, induced by exceſſive indulgence in venery, he found the ſalix vitellina the moſt efficacious; in involuntary diſcharges of ſemen, fluor albus, and againſt worms, the ſalix amygdalina was the moſt powerful; when adminiſtered in the form of extract in the two firſt diſeaſes, and in ſubſtance as an excellent anthelmintic.

Laſtly, the *bark of mahogany*, in powder, has been ſtrongly recommended on the authority of Dr. Lind, of Jamaica, as a valuable febrifuge, which has likewiſe been occaſionally preſcribed by phyſicians in this country with pretty general ſucceſs. Dr. Michaelis, of Leipzig; Profeſſor Loder,

of

of Jena; and Mr. Buchholz, a respectable mineralogist, all have, in their several writings, confirmed the remarkable antifebrile virtues of this cheap substance, when used in powder, and in the same proportions as the Peruvian bark.

A singular Case of Dropsy, after the Repulsion of the Itch, cured by Sulphur.

From an account communicated by a Physician of Worms, in Germany, to Professor Loder, of Jena, the editor of "*The Journal of Surgery, Midwifery, and Medical Jurisprudence*," Vol. II. Numb. I. we learn the following curious fact, which has been further corroborated by the experience of Professor Hufeland, who considers this case as conveying a decisive confirmation of the truth contained in the old doctrine of the *metastases*, or the translation of morbid humours from one part of the body to another.

A strong lusty woman, who had long dabbled in various quack medicines reputed among the vulgar as specifics in dropsy, was at length obliged to submit to the operation of paracentesis, which had been frequently repeated, with no lasting success. As she had formerly been troubled with the itch, which was cured by the use of sulphurated ointments, she was directed to take sulphur internally. The itch again made its appearance, and an inflamed tumour, of the size of a dollar, began to settle in the region of the navel. This tumour at last burst, and evacuated no less than forty-eight pints (*schoppen*, in Germany), of a fetid and putrid sanies. Several such evacuations succeeded, so that the whole of them is stated to amount to the enormous and almost incredible number of 484 pints!!! The itch at the same time, became violent, and the patient gradually recovered.—Gentle reader! it is certainly invidious to *doubt* facts, but sometimes equally difficult to *believe* them.

Mr. Kaufer, a respectable surgeon of Naugardt, in Pomerania, having observed that tubercles of the lungs generally arose from arthritic matter, and that sulphurated waters have frequently been administered with remarkable success in the *gout*, has lately made the following ingenious proposal. He advises consumptive patients, whose lungs are supposed to be affected with tubercles, constantly to breathe the atmosphere of such rooms, particularly in hospitals, as are inhabited by no other but psoric patients, or those who use *sulphur* internally; so that the vapours arising from the decomposition of that substance in the animal body may have immediate access to the lungs.—We sincerely wish, that this apparently well-founded conjecture may not be lost to the medical world; as sulphur cannot be given to phthisical patients with safety, by the organs of digestion.

MEDICAL AND PHYSICAL INTELLIGENCE,

(Original and Selected.)

A Work of the first rank has just made its appearance in Germany, whether we consider the importance of the subject, the celebrity of the two authors, whose observations are detailed in it, or the real excellence of its interesting contents. It is intitled, "*A Treatise on the Faculty of the Mind to conquer the Sensations produced by Diseases, by means of the simple Act of the Will.*" This is the production of the venerable philosopher Kant; it is published by Hufeland, and accompanied with notes by that respectable physician; so that we have before us the joint labours of two great men, on the most useful of all arts, that of *prolonging life*. So valuable and interesting a treatise demands more particular notice, and we shall endeavour to give the substance of it in the next Number of this Journal.

Professor Tode, of Copenhagen, has lately published, at Leipzig, an *Analysis* of a German book, intitled, "*Preliminaries of a Medical Peace, or Points of Union between* Brown *and his Opponents*," which analysis, he prefaces with the following severe remarks.

"I merely announce this book, without determining its price. I am more than ever convinced, that we ought not to lay hold of, or examine, an apple of discord thrown upon the ground. I have always thought, that the Brunonian system contains several truths which are not new, and several novelties that are not true. We have no right to blame those who demand proofs in confirmation of Brown's assertion, illustrated by cases of patients, and who pay no attention to theories unsupported by experience. It is undoubtedly disgraceful to the school of medicine in Germany, that such an author, of very little estimation in his own country, should actually produce a revolution, and that so many medical men think that they have hitherto been enveloped in complete ignorance, until it pleased Providence to raise up this precious instrument, to reveal medical truths. I, too, once imagined, that I had discovered the path of truth, but the young people, who ought certainly to have some understanding, raised such loud clamours, that I found it necessary to remain silent. The system of Brown, in the mean time, has opened an inexhaustible mine to the book-makers. To what a multiplicity of *explanations*, *commentaries*, *critiques*, and *apologies*, has it given birth! and behold, at length, the *preliminaries of peace*, not concluded by plenipotentiaries, but conceived in the head of an anonymous dreamer! Instead of examining the Brunonian system (and above all, where he pretends to have made a discovery of a truth), instead of citing the real discoverer, who had formerly laid down what Brown takes advantage of, instead of criticising rigorously the great number of false precepts which originate with Brown himself, the author appears to believe, and perhaps does believe, that the fancies of this visionary are applicable to practice; and hence, instead of peace, we shall only have *Brunonianism corrected and purified*."

The female Citizen Adrienne Liquiere, a pupil of the *Anti-Cæsarean School* of Citizen Sacombe, at Paris, defended, on the 19th of December last, a public thesis on the mechanism of child-birth, for which she was honoured with a prize-medal. Her thesis is divided into five sections, in which the fair author, with much acuteness and ability, endeavours, 1. To explain the *three* situations of the child in the uterus, and to prove that the third of these situations constitutes what is called *insensible labour*; the phenomenon which takes place during insensible labour, being a pathognomic symptom of the last stage of pregnancy:—2. To demonstrate *geometrically*, that the mechanism of child-birth consists in the spiral, rotary motion of the body of the child on its axis, at the moment when it clears its narrow passage, and the cavity of the small pelvis:—3. To determine the delivery by the head, the feet, the knees, and the buttocks; and to prove that the *thousand and one* positions, which the Cæsarean accoucheurs absurdly assign to the child in the uterus, ought to be reduced to *four*; the delivery by the knees or buttocks being merely modifications of that by the feet:—4. To support her doctrine against all objections that may arise against it:—and, 5. To prove that her learned friend, Professor Sacombe, was the first discoverer of the spiral, rotary motion of the child in the uterus; and that two modern authors, the elder Baudelocque and Hamilton, who have availed themselves of this discovery, are only plagiarists.

It is a fact already known, that *urine* contains phosphorus and several saline combinations with the phosphoric acid. Citizens Fourcroy and Vauquelin have lately discovered, in this liquid, the base of alum and phosphat of magnesia. They observed, that a particular animal matter, which characterises urine, and from which it acquires all its properties, quickly forms ammoniac; whence it ought to be classed among the triple salts; it being, in that state, considerably less soluble than before, and capable of being precipitated in a lamellated form, or chrystalline needles. These two chemists have ascertained the different alterations of which this liquid is susceptible; they have enumerated the spontaneous changes to which it is subject, and shewn that the investigation which they have only begun, is an object deservingly engaging the attention of physicians; inasmuch, as it may be the means of solving one of the most important problems in the animal economy of man, both in a healthy and diseased state.

Mr. Tennant formerly announced, that the *arthritic concretions* analysed by him, were a combination of the lithic acid and soda. This remarkable fact has been confirmed by a recent experiment made by Citizens Fourcroy and Vauquelin. They lately received from Citizen Veau, of Launay, a physician of Tours, one of the concretions that spontaneously separated from a gouty tumour of the fingers of a man whose joints were much deformed by the disease, and his fingers swelled to an enormous size. They submitted this concrete substance to chemical analysis, and found it to consist of the lithat of soda, now called the *urat of soda*, mixed with a considerable quantity of animal matter.

The observations of Citizen Baume, relative to the decomposition of the *calcareous muriate of lime*, as connected with the inquiries into the nature of a malady, called by physicians the *black*, or *atrabiliary disease*, of

of which Cit. PORTAL has developed the causes and effects, by pointing out the remedies to be employed in the cure of it—have engaged the attention of the Class of Physical Sciences, in the National Institute of France. We hope, in a future number, to be enabled to furnish our readers with the result of this interesting inquiry.

FOURCROY has recently published, in the '*Annales de Chimie,*' a Memoir containing his observations on the experiments made by the celebrated English chemist MAYOW, who about a century ago discovered many chemical truths, that bear a very striking resemblance to those lately demonstrated by the French chemists. The works of this philosopher, says Fourcroy, were first brought into general notice by the edition of them published by Dr. BEDDOES, in 1790. Of this learned 'Memoir,' we propose to give a more particular account in our next number. Let it suffice, for the present, to remark, that although Fourcroy does great justice to Mayow, whose merits and talents he admits to be greater than those of his cotemporaries, yet he is of opinion, that Mayow did not sufficiently pursue and demonstrate the principles of which he was the author; and that, in fact, he was not fully sensible of the importance of these discoveries, far less of the extent to which they might be carried. In short, Mayow only conjectured what the conclusive results, together with the luminous and scientific doctrines of modern chemistry, have reduced to mathematical certainty.

In the Italian Annals of Chemistry we meet with a letter from Dr. CARRADORI to Citizen DUPRE, expressing some doubts as to the solidity of the New System of Chemistry. The Doctor declares, that he cannot yet admit the *ensemble* of the new doctrine, but only some evident facts, or points demonstrated. He thinks that the combination of oxygen, during combustion, can hardly act a principal part in this operation, but must be accessory and foreign; the base of this gas having only a proper tendency (independent of the affinity or action which determines the combustion) to unite itself to bodies deprived of a portion of their phlogistic, carbonic, or any other principle of inflammability, by a considerable elevation of temperature. This combination might be made in a manner similar to that of water with alkali and caustic lime.

Neither has the composition of water, according to Carrodori, been satisfactorily proved, on which the whole edifice of LAVOISIER principally depends: the inflammable air obtained, is furnished by the body which serves to decompose the water, and not by that liquid. "The Italians will always object," says he, "that you *suppose* what requires to be *demonstrated*." If electricity decomposes water, why should not fire also decompose it? Nor is the experiment of the recomposition of water any more approved of by this author. The residuum, which he supposes always to remain after the condensation of the two gases, gives room to object, that all water was dissolved in airs, and only adhered to the elastic state, by the aëriform residuum, and some other incoercible element.

The author might adduce other facts, such as those which demonstrate the existence of an inflammable principle in certain combustible bodies, for example, sulphur; but, to use his own words, "*he declines these means of defence, having arms more than sufficient to combat the French errors.*"

Elements coercible, which give to water the form and nature of as many different gases as we are acquainted with; an *inflammable principle*, carbon, hydrogen, or phlogiston, which is a matter of no consequence, and

and which quits combustible substances according to a temperature somewhat elevated; these, say the French chemists in reply, are the well-proved things which Dr. Carradori puts in place of the most notorious facts, on which the structure of the new chemistry is founded.

The French National Institute have paid particular attention to the learned foreigners sent to Paris by their allies, to assist in the operations relative to *a general uniformity of weights and measures*. They are admitted to the private sittings of the institute, as well as to its library, and each of them has lately received elegant presents, particularly a highly embellished copy of DIDOT's magnificent edition of Virgil. One of these foreign literary characters, however, Mr. BRUGGS, from Denmark, has unfortunately given much offence; for it is alleged, that in his correspondence with Copenhagen, he has said every thing derogatory to the dignity of the institute, and represented it in very odious colours.

BRUGNATELLI has just published a discourse on *Light*, which he considers in *three different modifications*; namely, light chemically combined; light simply aggregated, but in a latent state; and light sensibly aggregated. The first of these is not to be separated from a body, but by the effect of elective attraction. Oxygenous gas, phosphorus, sulphur, &c. contain it in that state.

It appears from a number of experiments, made with great accuracy by Citizen BRUGNATELLI, on the means of producing detonatory fulminations, by phosphorus combined with different bodies, that, 1. The nitrate of silver, both chrystallized and melted, fulminates when struck with phosphorus, even at a low temperature, and that all the salts of silver do not fulminate in the same manner, nor with the same degree of violence; 2 That the greatest number of metallic nitrates fulminate with phosphorus; 3. That common nitre detonates with phosphorus alone, although the fulminating property of nitre was known only by mixing it with several combustible bodies, and elevating it to a certain temperature, or by placing it into contact with an inflamed body, as gunpowder, or other fulminating powders; 4. That those salts which contain no nitre in their composition, are not fulminating; 5. That the oxygenated muriates of pot-ash, silver, and mercury, fulminate with phosphorus; but the two last more feebly than many other salts; 6. That salts are not the only bodies which fulminate with phosphorus, some metallic oxydes possessing the same property; 7. That phosphorus is likewise not the only acidifiable and solid combustible body capable of producing fulminations, charcoal being attended with a similar effect, at a more elevated temperature; 8. That the bodies fulminating with phosphorus produce no such phenomenon when plunged into the oxygenated muriatic acid in a liquid state; neither do they fulminate, when exposed, jointly with phosphorus, to a high temperature. The stroke of the hammer is necessary to put in oscillation the component parts of bodies, in order to determine their affinities with a sufficient degree of accuracy. These inferences are deduced from the author's experiments, fourteen in number, which he concludes with an observation, that the oxygenated muriate of pot-ash, is well-known to produce effects superior to nitre mixed with charcoal and sulphur, and converted into gunpowder; and that it detonates by percussion or trituration, with a great number of combustible substances; but that he did not expect effects much more considerable in using simple nitrates, and even metallic calces mingled with phosphorus, and struck with a hammer.

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The uncommon degree of cold, which prevailed at Paris on a particular day of last winter, has given Citizens VAUQUELIN and FOURCROY an opportunity of repeating the experiments formerly made by Prof. LOWITZ of Petersburg, for producing artificial cold: the *decimal thermometer* stood, on that day, at 17° or 13° and six tenths of Réaumur. When this new thermometer was at 70° below the freezing point, they mixed eight parts of the muriate of lime, and six parts of snow loosely gathered. This mixture immediately generated an incalculable degree of cold; 20 pounds of quicksilver were completely frozen into a solid mass in half a minute, as well as spirits of wine, ether, the basis of vinegar, &c. On dipping the tip of the finger into this mixture, it lost all sense of feeling within four minutes, became as white as paper, and did not recover its sensation till held for some time in the mouth. At the first moment of immersion, an acute pain was felt in the finger, as if violently compressed in a vice. This artificial cold may be estimated at 40 degrees.

Two posthumous volumes of interesting chemical tracts, by the celebrated PIERRE BAYEN*, have just been published at Paris, by his nephew Citizen Malatret; of which we intend, in a future number, to give a detailed account. In the mean time we shall mention only that, among other valuable dissertations, these tracts contain analysis of the mineral waters of Luchon, accompanied with a number of chemical experiments; a picturesque description of the valley and springs of Luchon; an examination of the saline efflorescences found near the mineral sources of the ancient Roman baths; an analysis of the mercurial syrup of Belet; an investigation of a mine of sphatic iron (minera ferri alba spathi formis); and an analytical account of different stones and marbles;—all which subjects are treated in a manner worthy of the great reputation of the deceased author.

In the 83d Number of the "*Annales de Chimie*," we find a memoir by Citizen PROUST, on the chemical combinations of *tin*, which the author has published as a supplement to PELLETIER's investigations, relative to the different degrees of oxygenation of which that metal is susceptible in a state of solution by acids.

Citizen Proust agrees with BERGMAN's observations, that tin oxydated *ad minimum*, acquires only thirty parts in the hundred, and still contains some portion of the muriatic acid. If made red hot in the crucible, it parts with the muriate of tin in a gaseous form; and when the tin is oxydated *ad maximum*, it requires forty parts in the hundred, but it may be easily reduced to thirty; and then it is of a bluish colour, and insoluble in acids. The author concludes this memoir by saying, that although Pelletier made no mention of the muriate of white copper, he is fully persuaded, that this chemist was acquainted with the fact, from his having passed over the desoxydation of that metal by tin, in a manner which shewed his intention to resume the subject on a future occasion. But, while he does every justice to Pelletier, he affirms, in a manner carrying conviction, that although his operations coincided with those of his friend, they were originally contrived by himself.

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* Bayen, late member of the National Institute in the Section of Chemistry, was born in 1725, at Chalons, in the department of Marne. He died after a painful and lingering illness, which he bore with uncommon fortitude for twelve years, in the month of Pluviose, in the sixth year of the French Republic (January, 1798) at the advanced age of 72.—The French have lost in him a virtuous Citizen, and an excellent practical Chemist.

In the National Institute of France, Citizen Lheretier has presented the class of physical science with two new species of plants; the one discovered at Madagascar by Citizen Bruguiere in the course of his voyage round the world, and which the Institute has termed *Bruguiera*, in memory of their associate; the other, discovered by the same learned naturalist in the Isle of France, belongs to the family of orchis, and to which Lheretier proposes to give the name of *Rhizodendrum*. It is a species of acacia, originally a native of North America, and is called by Vauquelin *Robinia Viscosa*, from the glutinous matter which gathers on its surface. This substance much resembles that of resins properly so called, excepting that it is with difficulty soluble in alcohol, particularly when cold. Ether is its true solvent, and the result is a solution of pale green. In separating the ether when cold, the matter is extracted which forms the epidermis of the Robinia; it has neither flavour nor sensible smell; is extremely glutinous; is easily softened by the heat of the fingers, to which it closely adheres; swells when burnt, and leaves behind a portion of coal. It readily unites with fat and oil, but not with alkalis, and hardly with alkohol; on being exposed to the air, it does not dry like common resins. On account of these properties, Citizen Vauquelin considers this as a new vegetable production, which affords an unusual proportion of resinous matter.

A new work of the first consequence to the naturalist and botanist, will soon be published at Leipzig—the splendid *Flora Americana Septentrionalis*, by C. I. Hutter, of Philadelphia, who avails himself of this great *Book-fair*, to introduce to the learned of Europe this joint production of science and art. The drawings are made from nature, and a number of finished plates are already executed by the celebrated artist Eckstein, formerly Painter and Engraver to the Duke of Mecklenburgh. The colouring of the plates is intrusted to no other but professional botanists. Upon the whole, this work will unquestionably be the chief production of art, from the western Continent. Mr. Hunter announces in the Jena Gazette, that he hopes to be able to transmit the first numbers to Germany early in the spring. They will contain either non-descripts, or such plants as have hitherto been but imperfectly described.

Citizen Desfontaines has supplied an important desideratum in the science of Botany, by the complete *Flora of Mount Atlas*, a work of uncommon merit, which has very lately made its appearance at Paris.

Citizen Broussonet, whose zeal for science has led him to travel into various parts of Africa, has just published an accurate account of the process employed at Fez and Tetuan, for preparing goat skins, in making Morocco of different colours; together with correct descriptions of the plants used in Barbary for manufacturing this valuable article.

Mr. Sneyd, of Belmont in Staffordshire, has communicated to the Society for the encouragement of the Arts, &c. *a method of preserving the seeds of plants, in a state fit for vegetation*, by keeping or sending them surrounded either by raisins or brown moist sugar; which, upon a comparative trial, he found much preferable to packing them in absorbent paper; in the former case, the seeds were found fresh and healthy, while in the latter, there was a prevailing dryness, and they were infested by insects.

The ingenious Mr. Forsyth, his Majesty's gardener at Kensington, has lately discovered, and liberally communicated to the public, an effectual

remedy for destroying an insect, which has within these few years appeared in the *British orchards*, and threatens destruction to the apple-trees. These minute and imperceptible insects are lodged, in millions, in white efflorescences formed upon the trees, and not unlike those which may sometimes be seen on stones in the field. The following is Mr. Forsyth's composition, which has the additional merit, that it is cheap and easily procured. To any optional quantity of human urine, add as much cow dung and lime as will reduce the whole to the consistence of common paint: with this mixture the infected trees must be anointed about the latter end of March; and this simple precaution will fully answer the desired effect.

Citizen LAMARCK, in a memoir respecting the *new classification of shells*, lately read before the National Institute of France, has judiciously pointed out the necessity of increasing the number of genera, and more accurately ascertaining the characters which distinguish these fanciful productions of nature. He extends their number to one hundred and seventeen, whereas Linnæus and other naturalists have never exceeded sixty. This improvement of Lamarck will greatly facilitate the acquisition of scientific knowledge, in that amusing branch of natural history.

A gentleman of Long-Island, in America, has lately discovered there a new variety of iron-ore of the argillaceous kind. Walking on his farm and observing the various mineral productions under his feet, he took notice of a small spot which had the appearance of being paved with stones of a regular figure. On taking up some of them, he found their structure the same with the common argillaceous iron-stone which lay scattered about in rude lumps, but their shape was nearly pentagonal. They were about four inches long, and stood perpendicular, close to each other, in a stiff loam: in some four sides only were to be traced. The number of these stones was thirty-six, evidently formed from a solid circular mass of argillaceous iron-ore of about two feet five inches in breadth, and four inches in thickness in the central parts, and becoming thinner towards the edges. In the natural fracture of the stone, the pieces had separated in these regular forms, much resembling basaltes; and like basaltes, though figured, they were not crystallised, but as completely terrigenous and opaque as any argillaceous iron-ore. These specimens go very far towards deciding the dispute, if any doubt still remain, of the igneous or aqueous origin of basaltes. They support by the most powerful evidence the latter doctrine; as they cannot be supposed to be a volcanic production—the American gentleman agreeing in opinion with BERTMAN, WEIDMAN, and KIRWAN, that most, if not all basaltic columns, have been formed by crystallization.

A committee of the *Medical Society of New York*, consisting of Messrs. TILLERY, RODGERS, and MITCHILL, were chosen at a meeting of that body, lately held for the express purpose of investigating the *origin, cause, and prevention of the pestilential distempers*, which for some years past have so terribly afflicted New York, and other cities and towns of the United States. We hope, the report of the committee will shortly appear; and as they have been promised the aid of the Municipality, as well as of the Health office, their means of procuring information will be greatly facilitated, and thus an opportunity offered of laying before their fellow-citizens a much wanted statement of facts, to elucidate the true nature of the yellow fever.

There is at present a considerable controversy at Paris, on the subject of *Inoculation for the small pox.* From the great mortality which lately prevailed

vailed, when that disorder was contagious, several writers endeavour to persuade government to prohibit inoculation, at least within the precincts of towns. The advocates for inoculation, on the other hand, contend, that such an interdiction would be similar to the *arretés* of the old Parliament, against emetics, and indeed against inoculation itself—arretés which so much disgraced France. They deny that the contagion has become more frequent since the practice of inoculation, while the disease itself has thus been rendered less virulent and fatal; and they add, that were inoculation to become universal, it would be the means of extirpating the disorder, as no person would remain liable to infection.

In the mean time, the *cow-pox*, which has of late been the subject of much discussion in this country, has also attracted the attention of the French physicians. In the *Decade Philosophique* of the 10th Ventôse (20th February) we meet with a particular account of Dr. JENNER's treatise on this subject. The French reviewer confines himself to an analysis of Dr. Jenner's work, and does not attempt to give a conclusive opinion on the question now at issue before the public. He however justly remarks, that if the inoculation for the cow-pox prevent the infection of the small-pox, the author who promotes so beneficial a practice, instead of being reprobated for the propagation of a *new* contagious malady, renders an essential service to mankind.

Dr. BRERA, Professor of the Practice of Medicine in the University of Pavia, lately announced a work intitled, '*Ratio medendi, qua in clinico instituto Ticinensi, ab initio mensis Decembris,* 1796, *ad finem usque Junii.* 1797, *usus est, &c.*' Having, however, considered, that were this work to appear in the Latin language only, its practical utility would be much confined, the Professor has judiciously determined to publish a translation from the original manuscript in the vernacular language of Italy.

In this work, the author proposes particularly to place in a more conspicuous light the *Brunonian Theory of Medicine;* to inquire into its merits; to refute, by actual observation, those points which rest upon erroneous principles, and to illustrate others which have a practical tendency. The whole work is to be divided into two parts, each of which will form one folio volume, embellished with four plates, by the celebrated engraver Anderloni.

Of this splendid work Messrs. ORELL, FUESSLI, and Co. at Zurich, have advertised a German translation, to be conducted under the immediate superintendance of the author, who has likewise agreed to furnish them with impressions from the original plates. We trust that this country will not be long without a translation of so valuable a work.

Among other translations of useful Medical books, from the English into the German language, Dr. MICHAELIS, of Leipzig, has lately announced a correct version of Dr. GEORGE FORDYCE's original and classical work, intitled, "*A Third Dissertation on Fever,* Part I. containing the history and method of treatment of a regular continued Fever." The two former Dissertations, by the same author, and likewise translated by Dr. Michaelis, were received in Germany with universal approbation.

The *Physical Journal,* formerly conducted by the celebrated Professor *Gren,* who died of a nervous fever, on the 26th of November last, at Halle, in his 39th year, will be continued under the new title of *Annals of Physics,* by Professor GILBERT, of the same University, who has undertaken the office of editor. Two numbers of this excellent work have already appeared,

appeared, and Mr. Gilbert hopes to be enabled to furnish a number every month, but the particular time for its publication is not specified.

The second volume of the "*System of Pharmacology,*" begun by the late Professor *Gren*, will be completed from the materials found after his demise, by two of his learned friends, who, by a public advertisement in the Literary Gazette of Jena, have pledged themselves to publish this volume in October next.

Dr. Koelner, a clergyman of Gotha, has lately published a German translation of the "*Chemico-physiological Essays,*" originally written in Latin, by *J. Mayow*, in 1681. This translation is embellished with six engravings, and accompanied with a learned historico-critical preface, from the pen of Dr. *Scherer*, Counsellor of mines to the Duke of Saxe-Weimar. Dr. Scherer also proposes shortly to publish his own Commentary on the works of Mayow.

Mr. Achard, of Berlin, has made several experiments, with a view to determine the *effects of electricity* on the fermentation of vegetable substances, and the corruption of dead animal bodies. From the result of his inquiries it clearly follows, that electricity is a remarkable agent in these processes of nature, as it has an obvious tendency to accelerate both; and that the sudden putrefaction of flesh, whether raw or dressed, must be ascribed solely to the more abundant accumulation of electric matter, at that time. Mr. Achard has also discovered, by experiments, that in a body of atmospheric air, confined in a Leyden flask, and electrified as strongly as possible, neither absorption nor dilatation had taken place; and that the same was the case when he exposed the jar to abundance of sparks: from which it appears, that the quality of the air is not changed by electricity, or that the electric matter must pass through the interstices of the air, without causing any separation of its component parts.

The Abbe Spallanzani has lately discovered a spring of fresh water, which rises through the salt water, in the Mediterranean sea, at the distance of sixty-five feet from the shore, about a mile from Spezzia. It is about twenty feet in diameter, and thirty-eight and an half in depth. The water at the surface is not fresh, but somewhat less salt than that by which it is surrounded. By means of a medicine invented for the purpose, Spallanzani ascertained that at the bottom it is perfectly fresh, but exceedingly turbid and slimy. This phenomenon the Abbé considers to proceed from two small streams, which flow down a hill in the neighbourhood of Spezzia; and, after being united, throw themselves into an unfathomable abyss, from which the water forces its way through the earth, and furnishes nourishment to the fountain that rises in the sea.—Since writing this article, we learn that the world has lost this eminent philosopher.

In the new transactions of the Royal Society of Goettingen, we meet with somo curious and interesting observations and experiments, made by Professor Beckman, *on staining wood*. A piece of plane tree, put into pounded dragons-blood, mixed with oil of turpentine, and placed over the fire, in a glass vessel, acquired in a short time a beautiful mahogany colour. The wood, when stained, can be easily freed from the dragons-blood adhering to it, by means of rectified spirit of wine.—Gamboge, dissolved in spirit of turpentine, gave the surface of a small piece of wood a shining golden yellow colour, except the fibres and veins, which inclined rather to red. A piece of pear-tree in the same solution acquired a darker

a darker colour, somewhat approaching to green, and in part became nearly of an olive colour: different colours may, therefore, be obtained by using different kinds of wood.—One part of dragons-blood, two parts of gamboge, gave to the wood of the plane-tree and beech, a remarkable variety of dyes.

The same dyes had nearly a similar effect on the wood, when prepared in spirit of wine. When they were merely dissolved in spirit of wine, the extract was not sufficiently strong; it was necessary to boil it over a slow fire, till nearly evaporated, but the colour is never so bright as that produced by means of an oil. The professor also enumerates various experiments with dissolved salts and metals, which have been successfully made, but as these are already described by MACQUER, we think it unnecessary to transcribe them.

As the subject of typhus-contagion, and its hitherto inexplicable effects on the animal frame, are involved in so much darkness and uncertainty, that it forms, and will perhaps ever continue to form, one of the most interesting problems to the chemist and physiologist, we announce with satisfaction a work which, we understand, is ready for the press, and will be published without delay; it is intitled, "*Observations deduced from facts and experiments, tending to evince the non-existence of typhus-contagion; interspersed with remarks on animal life, and on those laws by which it is governed:* by JOHN FRANKS, navy surgeon, and member of the Corporation of Surgeons of London."

The author is of opinion, that the debilitating effect produced on the animal machine, by the operation of *fear*, occasioned by the influence which this invisible, undefined *something* has obtained, is the only contagion which we have to guard against; and that every circumstance of a febrile state may be very satisfactorily accounted for, without having recourse to contagion as a cause of disease. He further observes, that besides the difference of opinion which prevails respecting the *nature of contagion*, the evidence of its reality is very defective, and that we are not even possessed of a correct definition of this invisible and incoercible agent.

Mr. WHITE, a respectable practitioner of Manchester, is preparing for the press a highly interesting anatomical work, which, we understand, is in considerable forwardness, and will shortly be published by DILLY, London. From the accounts we have been able to obtain, this work is chiefly devoted to *comparative anatomy*. It will form one quarto volume, embellished with elegant engravings, and be intitled; "*A Treatise on the Gradation of Man.*"

The *Physical Society of Guy's Hospital* have proposed the following prize questions, for the year 1799:

In Medicine:—What is the origin of the cow-pox, and in what does it differ from the small-pox? Are its effects on the human constitution milder than those of the inoculated small-pox—and is a patient, who has been inoculated for the cow-pox, and experienced its constitutional effects, equally secure from the contagion of the small-pox?

In Physiology:—How do the vegetable and mineral poisons act upon the body—and what are the best means of preventing their deleterious effects?

Dissertations in answer to the questions proposed, must be delivered to the librarian, previous to the first Saturday in December, 1799. According to the established laws of the Society, a motto shall be prefixed to each dissertation, and with it must be delivered a sealed packet, with the same motto

motto on the outside, and with the author's name on the inside. Two sets of books, value five guineas each, are annually given to the authors of the two best dissertations on the subjects proposed.

The two questions for last year were as follow: 1. What is the cause of intermittent fever—and what are the best means of curing it? 2. What is the proximate cause of inflammation? We understand that the successful candidate, in answering both questions of last year, was Dr. WARWICK, of Rotherham, in Yorkshire.

The medical world has lately sustained an irreparable loss by the death of FREDERIC ALBRECHT CHARLES GREN, Professor of Medicine in the University of Halle, and member of several learned societies in different parts of Europe. He was equally eminent as a judicious practitioner in physic, as an excellent teacher, and one of the ablest chemists Germany has given birth to. By a cool and steady opposition to the contested principles of the present antiphlogistic system, the truth of which he, at length, himself admitted, he has done infinite service to the chemical science; while he cultivated Natural Philosophy with an ardour almost unexampled. The celebrated '*Journal der Physick*' has been conducted by him, during the last ten years, and is now continued by one of his learned friends, Professor GILBERT, of Halle, under the title of '*Annales der Physick**.'

Gren is the author of various and valuable publications, the principal of which are the following: '*A systematic Manual of Chemistry*,' first printed in two volumes octavo, but re-published in a second improved and enlarged edition, consisting of four volumes, about the year 1795: —'*Principles of Pharmacy and the Materia Medica*,' in two volumes:— '*Observationes et Elementa circa Genesin aëris fixi et phlogisticati*;'—'*Observations on Fermentation and the Projects thence obtained*, &c.

We lament the early demise of this favourite friend of science, whose indefatigable exertions for the improvement of mankind, and the honour of his country, have been fatally terminated by a nervous fever—the endemic disease of the German literati—when he had scarcely attained his 38th year, and his labours and productions had become objects of admiration, in Germany as well as in France. The chemists of the latter country never mention his name but with respect, and the New System of Chemistry found in him, successively, an acute opponent, and able supporter. He was born at Bernberg, a small town in Germany, on the 1st of May, 1760, and died at Halle, universally regretted, on the 26th of November, 1798.

Geneva, the small but important republic in the various departments of literature and the sciences, has lost on the 22d of January last, one of her most celebrated and dignified sons, HORACE BENEDICT DESAUSSURE, aged 58, who has long adorned his native city, as an excellent naturalist, chemist, and mineralogist.

In his 21st year, he was appointed Professor of Philosophy at the Lyceum of Geneva; an office which he held with much honour to himself, and benefit to the students that attended his lectures, till the year 1786, when he resigned it to his former pupil and coadjutor, the present Professor PICTET, who ably fulfils that difficult task, after succeeding so learned a man.

Desaussure was the founder of the Society of Arts, to which Geneva is in a great measure indebted for the great reputation and prosperity it has attained during

* Vide page 193 of this Number.

during the last thirty years, and of which he continued the president until his death. As a member of the Council of Two Hundred, and afterwards, as a member of the National Assembly of Geneva, he had frequent opportunities of testifying his patriotic zeal. He lately had the honor of being appointed Professor of Natural Philosophy, at the National Institute of France; an appointment, however, the active duties of which his impaired state of health did not permit him to discharge. Among other works of this celebrated philosopher, we shall mention only his '*Travels in the Alps*,' in four volumes, octavo; '*Essays on Hygrometry*; and his '*Observations on the Epidemics of leaves*.'

He has left behind him two sons and an amiable daughter. With the accomplishments of her sex, she combines an extensive knowledge of the sciences; and his eldest son is already known as a respectable chemist, and adept in Natural Philosophy.

List of Medical Promotions in the Army.

——Roberts, M. D. Physician to the Forces, to be Assistant Inspector of Hospitals in the Leeward Islands, in the room of —— M'Intire, retired on half-pay.

Dr. Moore, to be Inspector of Hospitals in Portugal.

Dr. Robertson, Inspector of Hospitals in Portugal, is removed to the same office in Minorca.

Surgeon Henry Worth, of the First Foot Guards, is appointed Surgeon to the Savoy Prison.

Surgeon Wm. Holmes, of the 5th Foot, to be Surgeon to the Forces in Lower Canada.

Mr. Thomas Thompson, to be Assistant Surgeon to the 21st Regiment of Light Dragoons, in the room of Mr. J. Woodcock, deceased.

Assistant Surgeon Thomas Nixen, to be Surgeon to the First Regiment of Foot Guards, *vice* Worth, appointed to the Savoy Prison.

Mr. Samuel Watson, to be Assistant Surgeon, *vice* Nixen.

Mr. Pooler, to be Assistant Surgeon to the 17th Regiment of Foot.

Mr. Francis, to be Surgeon to the 67th Regiment, *v.* Fergusson, promoted to the 5th Foot.

14th Dragoons, Assistant Surgeon Thomas Kidd, to be Assistant Surgeon, *v.* —— Newman, placed on half-pay.

2d Battalion Breadalbane Fencibles, Mr. D. M'Leod, late of the First Batt. to be Surgeon.

Mr. Lewis Leese, to be Surgeon to the Volunteer Association of the Ward of Bread-street, London.

85th Foot, —— Abercrombie, to be Assistant Surgeon, *v.* Blyth, resig.

Mr. R Colmer, to be Surgeon to the North Petherton Volunteers.

5th Foot. Surgeon Wm. Fergusson, to be Surgeon, *v.* Holmes.

Mr. Wm. Lewis, to be Surgeon to the Sussex Fencible Cavalry, *v.* Thomas, resigned.

Mr. Henry Reed, to be Surgeon to the 89th Foot, *v.* Rouch, retired.

CRITICAL RETROSPECT
OF
MEDICAL AND PHYSICAL LITERATURE.

[FOREIGN AND DOMESTIC.]

NATURAL HISTORY AND BOTANY.

Tableau elémentaire d'histoire naturelle des animaux: i. e. "*An elementary view of the Natural History of Animals;*" by Citizen CUVIER. One Volume 8vo. with fourteen plates. *Paris.* Baudouin.

In this popular and instructive work, the author treats successively of the physical history of man, the mammalia, birds, reptiles, fishes, insects, and zoophytes. He explains and compares the varieties and modifications of the principal organs of animals, in as clear and satisfactory a manner, as our present knowledge of Physiology and Natural History will admit. The different colour and temperature of animal blood forms an additional and highly interesting object of Cit. Cupier's able inquiries; hence he classes them under the various heads of animals with red blood and white blood; and again divides them into those having warm and red blood, and those of cold and red blood.

In the course of his researches, Cit. Cuvier has observed in the leech red blood, not that which it sucks, and which would be contained in the intestinal canal, where it is immediately altered, but a real nourishing fluid contained in the vessels, and circulating there by means of an alternate movement of the systole and the diastole. These vessels form four principal trunks, two of which are lateral, the third dorsal, and the last ventral. The two former are of an order different from the two latter; but the author has not yet been able to determine which are the arterial, and which the venal. The two lateral vessels proceed from one end of the body to the other, and are joined by branches, which form a very beautiful tissue when injected. The ventral and dorsal vessels do not form a tissue of the like kind. They only throw out branches disposed alternately in an oblique direction, and subdivided in the usual manner. The second is placed exactly under this medullary cord of the ganglions, from which all the nerves proceed. It is impossible to open a leech, without producing a great effusion of that blood. Enough, however, remains in the vessels to be distinguished. Its colour is almost the same as that of the arterial blood of the frog.

The whole of this original work is treated in a manner by no means derogatory to the fame of this author, who is already known to us as an excellent naturalist.

Histoire Naturelle des Poissons, &c. i. e. "*The Natural History of Fishes;*" by Citizen LACEPEDE, 4to. and likewise 12mo. *Paris.* Plassan.

This is, perhaps, the best work upon the subject that has ever been published, and may be considered as a valuable continuation of *Buffon.* It is written in a manner equally pleasing and instructive. The most interesting section of the book, is that in which the ingenious author considers the distinctive character between fishes and other animals, namely, their cold red blood, their having no lungs, and respiring through the gills. After having ably commented upon these particulars, he treats of the senses of fishes,

fishes, the most perfect of which is that of smell, then the sight, and next to it, hearing; touch and taste being the most imperfect of their sensitive faculties. On the whole, he ranks them towards the middle of the scale, for ascertaining the degree of sensibility in such beings as are provided with organs of sense.

Cit. Lacépéde further examines the respective degrees of re-production, the swimming power, the mode of nourishment, sleeping, and the social qualities of these animals: he concludes this part of the work by giving an account of the prevalent diseases among fishes, their frequently prodigious size, their utility, &c. In describing that astonishing animal the *torpedo*, the author satisfactorily illustrates the extraordinary effects, which the person attempting to seize it experiences on the arms;—when treating of the *shark*, he furnishes us with an animating picture of that voracious monster.

Throughout this classical work, the author is highly instructive, particularly on subjects where he endeavours to diffuse scientific knowledge; correct in his definitions and details; accurate in classing objects; luminous in the explanation of causes producing the phenomena of nature; interesting in painting habits and peculiarities; and his language is truly sublime when he demonstrates the difference subsisting between the various species of fishes, as well as the characteristic distinction prevailing between them and other animals.

Tableau des Systêmes de Botanique, &c.—A View of the Systems of Botany, general and particular; the Principles on which they are founded: together with an Explanation of the Sexual System of Linnæus. By MOUTON FONTENILLE. 8vo. *Lyons.* Reyman.

The title-page of this work affords a sufficient idea of its contents. We do not recollect that we possess in the English language a book of a similar nature, and equal merit. The two 'Memoirs' which the author has subjoined to this work, are not the least interesting part of it: the first contains a detailed account of experiments on various methods of drying plants, and their preservation in herbals; in the second, we meet with observations on the different kinds and species of vegetables, peculiar to the calcareous and granite mountains in the vicinity of Grenoble. The whole reflects honour on the industry and abilities of the author, and will be read with satisfaction by the botanist, as well as the naturalist.

Les Plantes, &c.—The Plants, a Poem. By RENE RICHARD CASTEL, Professor of Literature, &c. Second edition, enlarged, 18mo, with five plates, (3 livres bound) *Paris.* Déterville.

This production of the French Muse has been universally admired, ever since its first appearance. The picturesque disposition of the plan, combined with elegance and sweetness of versification, have rendered it a work of general approbation; insomuch that the National Institute have deemed it worthy of being announced as a work of superior merit, at one of the late solemn festivals of the French Republic. The author has not been insensible of these honourable tokens of public attention. In the present edition, he has made considerable improvements, and added many harmonious verses. In short, this specimen of didactic poetry may be justly ranked in the first class of such compositions; for, whether in point of originality and flights of genius, or in the beauty and arrangement of imagery, it is in every respect a fair rival of Dr. DARWIN's '*Botanic Garden.*'

To the explanatory notes, the author has likewise made numerous additions, so that they afford a variety of useful information, while they are

written with elegance and precision. Lastly, the engravings are correct and well executed.

Histoire des Plantes de l'Europe, &c.—The History of European Plants; or Elements of Practical Botany: being a summary description of the indigenous Plants, as well as the most useful exotics; according to the arrangement and principles of Linnæus, and accompanied with modern observations. By J. E. GILLIBERT. 2 vols. 12m. *Lyons.* Leroy.

This elementary treatise, particularly the first volume, is chiefly intended for the instruction of the tyro, in the first principles of botany, and to introduce him to the knowledge of the most common plants. The second volume contains more extensive descriptions, and critical discussions of foreign plants. The whole is interspersed with interesting observations on the different plants, both indigenous and exotic. The author has likewise added to this useful little work a table, exhibiting the synonimous botanical names of plants used by TOURNEFORT and LINNÆUS, together with a pretty complete dictionary of technical terms, peculiar to the science of botany. The plan he has adopted deserves every commendation, and ought to be imitated not only in teaching natural history, but in other studies, particularly in geography and universal history, as it is unquestionably the easiest, and most natural, to promote and facilitate the acquisition of science. And this simply consists in leading his pupils, by gradual steps, from the native plants growing wild in the vicinity of Lyons, to those of other and more distant parts of France; from these, to the knowledge of the vegetable productions of the different countries of Europe, and lastly, to the plants peculiar to the most distant countries.

Plantæ novæ, &c.—A Description of new plants which grow wild in Spain, or are cultivated in the gardens of that kingdom. By D. A. CAVANILLES. Folio. Vol. I. and II. *Madrid.*

The first volume of this magnificent collection contains 110 plates, among which we meet with representations of several new species of plants; the second is embellished only with 34 plates, but they exhibit mostly new, rare, and valuable plants, natives either of Spain or Mexico. The descriptions appear to be critically accurate, and relate to the stalk, leaves, flowers, calyx, corolla, stamina, buds, fruit, and seed of each plant; they particularize the places where it grows naturally, and by artificial culture, whether it is an annual or perennial plant; the time of its flowering; including many useful and interesting observations. Nothing, indeed, seems to be omitted, which could contribute to render this national work, the first of its kind in Spain, a complete history of the different plants therein enumerated.

Plantes rares du Royaume de Naples.—The scarce Plants of the Kingdom of Naples. By DOMINIQUE CYRILLI; 2 Numb. Folio. *Naples.*

This is an uncommonly elegant and learned work. The language, although not strictly classical, is generally correct; the descriptions are clear and satisfactory; and many of the plants described are equally curious and interesting: among these we take particular notice of the *brassica fructiculosa*, which grows on the dry sea-sands near Naples; the *allium trifoliatum*, a species hitherto unknown; the *allium speciosum*, and the *allium cilliatum*, of which two last species he gives the history, together with their botanical characters.

The second number concludes with a plant, which the author terms *arundo ampelodesmon*; it is a species of the calamus, frequently found on the

the coast of Naples and Sicily: and Mr. Cyrilli assures us, that this vegetable promises incalculable advantages to the agriculturist, the mariner, and the artist. Each number of this collection is accompanied with twelve well-engraved plates.

Herbarium Mauritianum.—"*The Mauritian Herbal:*" *by* P. R. WILLEMET, with a Preface, by A. L. MILLIN. 8vo. *Leipzig.* Wolf.

The herbal before us is the fruit of a journey to India, undertaken by Cit. WILLEMET, with a view to explore and illustrate this part of natural history. It contains analytical descriptions of no less than 200 Mauritian plants, together with their botanical and vulgar names. The author points out the particular situations in the island of Mauritius, where these plants grow spontaneously; he mentions all the varieties he met with, and ascertains the time when they are in flower: a number of these are new, and first discovered by himself. The premature death of this ardent and able botanist, will be much and long regretted, particularly by the lovers of that useful and agreeable branch of the sciences.

CHEMISTRY AND NATURAL PHILOSOPHY.

Cours elementaire de chymie theorique et pratique, &c.—"*An elementary View of the Theory and Practice of Chemistry, according to the new Nomenclature; together with the most useful and entertaining Experiments made in this Science.*" By Cit. ALYON, Officer of Health in the Military Hospital of Val-de-grace. 2 volumes 8vo. 1798—99. Paris. Published by the Author.

The contents of this excellent treatise fully correspond to the professions of its title, and it is written in a plain and perspicuous style. Although it is chiefly designed for the use of the tyro, it well deserves to be recommended also to the attentive perusal of the practical chemist, as it abounds not only in new and original experiments, but likewise in chemical preparations, the various processes of which had not hitherto been published. Among other medicinal articles, the author gives directions for preparing an oxygenated ointment *(pomade oxygenée)* by the successful application of which he has obtained considerable celebrity among the Parisians, in the cure of lues venerea.

Elements of Chemistry: by JOSEPH FRANCIS JACQUIN, Professor of Chemistry and Botany, at Vienna; Fellow of the Linnæan Society of London, and Member of several Academies of Science, Agriculture, &c. *Translated from the German.* 8vo. 428 pp. with Preface, Table of Contents, &c. with a Plate representing Woulfe's Apparatus for Compound Distillation. *London*; Murray and Highley. *Edinburgh*; W. Mudie. 1799. 7s. 6d.

From the advertisement prefixed to this volume, we learn that it is translated by a Mr. HENRY STUTZER, who, at the same time informs us, that these Elements were originally written with a view to convey to the young student a knowledge of the most important truths in chemistry. We agree with the translator, that this work is written by Mr. Jacquin, 'with accuracy and simplicity:' we further allow him the merit of having done complete justice to the original, as the language, in general, appears to be correct and perspicuous: but we cannot persuade ourselves, that the author has made choice of the best and most advantageous *form* to

to convey scientific truths to the novice in chemistry, for whom this elementary work is professedly designed. *Aphorisms*, in our opinion, are not calculated to afford a well-connected or systematic view of a science, particularly if subjective truths are to be demonstrated by reasoning upon experiments, for the corroboration of which we avail ourselves of hypothetical premises. Such was formerly the case with the *phlogistic theory*, and in many points is still so with the present *antiphlogistic system*. Both admit a certain *substratum*; and whether this be in *every case demonstrable*, or not, the theory must be supported.

In justice, however, to Professor Jacquin, it must be confessed, that his explanations are concise, and, in most instances, satisfactory. The work is divided into four principal sections, although the running number of paragraphs, amounting to 1122, is carried through the whole book; a circumstance which gives it rather an antiquated appearance. In the first section after a short and apposite *Introduction*, the learned author treats: I. Of chemical solution; II. Of chemical affinities; III. Of caloric, or the matter of heat; IV. Of the matter of light; V. Of the atmosphere; VI. Of water.

In the next division of the work, the author discusses "the *mineral kingdom*," the subjects of which are carried on from section VII. to section LXXXIX; or from page 53 to 234.

The third part is devoted to "the *vegetable kingdom*," which extends from section XC. to CXVI.; or from page 235 to 302.

The last division contains the "*animal kingdom*," from section CXVII. to CXLVI.; or from page 309 to 372.—The author then concludes the work with an "*Outline of the Phlogistic System*," from page 373 to 381; and an accurate "*Description of Woulfe's Apparatus for Compound Distillation*," from page 382 to 405; which is accompanied with a neatly engraved plate, representing the different vessels used in that process.

The translator, lastly, has provided this interesting work with an useful alphabetical index.

Opuscules Chymiques, &c.—"*Chemical Tracts; being a Sequel to a rational and experimental System of Chemistry.*" By BAUME, 8vo. (4 livres.) *Paris*, Agasse.

These 'Tracts' contain the author's observations and discoveries, made in the course of twenty-five years assiduous application to this science. Several of these papers have already appeared in different periodical publications, but they are now collected in one volume. They contain, in particular, *elucidations respecting the cause of the causticity of quick-lime*, and the *chemical agents* which Macquer attributed to the union of water and earth, and which the author found combined and modified in fire, under an infinite variety of forms. The inquiry into the cause of that causticity, forms the subject of the first memoir. The following treat—Of the means of purifying fixed alkalies.—Of pot-ash and its purification—Of the fixed salt of tartar—Of soda—Of mineral alkali rendered caustic by quick-lime—Of the lye of soap-wort—Of light.—Several other memoirs, on the construction of thermometers—the distillation of spirit of wine and mercury—together with other curious and important subjects; all which are treated in a manner worthy of the talents and learning of the author, who is well known as one of the most distinguished chemists of the present age.

Chronologische Geschichte de Naturlehre, &c.—"*Chronological History of Natural History, continued down to the present time.*" Translated from the French of DE LOYS, Member of the Economical Society of Bern; by Dr. C. G.

Dr. C. G. Kuehn, Professor at Leipzig. Vol. I. 310 pp. 8vo. 1798. (1 rixdollar, or about 3s. 6d.) *Leipzic*, Weygand.

This little work, which is neither sufficiently accurate nor complete, did not deserve the honor to be translated by a German Professor. The original appeared at Strasburgh, in 1786; and although the Germans (as well as the English) possess no satisfactory works on this interesting subject, it cannot be justified nor commended, to multiply such hasty compilations and superficial works, by translating and reprinting them in other countries. If Professor Kuhn had supplied the deficiencies, and corrected the numerous errors in this 'Chronological History' with his usual sagacity and industry, we should not have hesitated strongly to recommend the translation of such a book into the English language; but, in its present state, we trust the English press will not be debased by an attempt to introduce it to our market.

MEDICINE AND SURGERY.

The effect of the Nitrous Vapour, in preventing and destroying Contagion, ascertained from a variety of trials, made chiefly by Surgeons of His Majesty's Navy, in Prisons, Hospitals, and on board of Ships; with an Introduction respecting the Nature of the Contagion which gives rise to the Jail or Hospital Fever: and the various methods formerly employed to prevent or destroy this. By James Carmichael Smith, M.D. F.R.S. Fellow of the Royal College of Physicians, and Physician Extraordinary to his Majesty. 8vo. 231 pp. *London*, Johnson. Price 5s.

In an explanatory preface, the author informs us that the experiments made with the nitrous fumigation, during the last three years, or since the time when he published an account of it, have proved, in the clearest and most unequivocal manner, to every unbiassed mind, not only the power of the nitrous vapour in destroying contagion, but the safety with which it might be used.

The introduction, from page 1 to 48, contains those general observations on the jail and other putrid contagions, with the usual means of obviating these, formerly published in the '*Treatise on the Fever at Winchester*,' and now republished, from a wish to make them more generally known. The principal part of this work consists, 1, of a '*Report of the Experiment for stopping the Progress of Contagion, as executed on board the Union Hospital-ship, at Sheerness; by Mr. Arch. Menzies*:' from page 49 to 114.—And 2, of a Collection of Letters by Messrs. *Paterson, M'Grigor, Hill, Griffin, Glegg, Magennis, Snipe, Blatherwick, Brown*, and *Drew*, surgeons of different ships and hospitals; a letter from Capt. *Lane*, Farham; extracts from Letters or Journals of Surgeons of the Navy, transmitted to the Board of Sick and Hurt; and the correspondence between Drs. *Withering, Duncan, Percival*, and the authors relative to this subject.

Memoirs of the Yellow Fever, which prevailed in Philadelphia, and other parts of the United States of America, in the Summer and Autumn of the present Year, 1798; including Tables of the Weather, &c. By William Currie, S. C. M. P. author of an Historical Account of the Climates and Diseases of the United States, &c. &c. 8vo. 145 pp. *Philadelphia*, Dobson.

This pamphlet contains a collection of facts truly valuable to every medical practitioner, but the author has been at no pains to arrange them. He

He begins his work with a sketch of the weather from January to July, 1798, and opens this melancholy budget of disease and death, with the 1st of August, when the first case of yellow fever occurred, which proved fatal on the 4th. He then proceeds in chronological order, with detailing new cases, addresses to the public by magistrates and physicians, new methods of treatment, number of deaths, and occasionally too, accounts of robberies committed, &c. The month of September is likewise prefaced with a Table of the Weather, together with daily returns of the sick and the deaths in that month. A gloomy picture indeed! as, in the city of Philadelphia alone, not less than 3446 persons fell victims to this malignant epidemic, between the 1st of August and 3d of November.

Dr. Currie endeavours to prove, by a great number of concurrent circumstances, that the contagion, which gave origin to the late epidemic, was imported in the ship Deborah, which arrived at Philadelphia, from Jeremie, on the 18th of July last. He further quotes the opinion of the College of Physicians of that city, who agree with him, that the yellow fever is derived from imported contagion, and who, for this opinion, assign the following, among other reasons:

"The disease in question, 'say the College,' is essentially different from the fevers that occur in this climate, and which originate from domestic causes. It also differs from them essentially, in the circumstance of being contagious; a bilious fever originating from domestic causes, having never been, to our knowledge, contagious in this climate."

An Outline of the History and Cure of Fever, endemic and contagious; more expressly the contagious Fever of Jails, Ships, and Hospitals; the concentrated endemic, vulgarly called the Yellow Fever of the West Indies: To which is added, an explanation of the principles of military discipline and economy; with a scheme of medical arrangements for armies. By ROBERT JACKSON, M. D. 8vo. 396 pp. *Edinburgh*, Mundell and Son; *London*, Longman, Murray and Highley. Price Seven Shillings.

In an advertisement prefixed to this work, the author modestly mentions the opportunities he has had of making medical observations, since the year 1774, as an army surgeon, first in Jamaica, and afterwards in America, where he had opportunities of observing very extensively the different forms and degrees of fever, in the southern states. In the year 1795, he was again ordered to the West Indies—to the island of St. Domingo, where the duty assigned to him afforded the means of examining the appearance of things, at different posts, and in different districts, more fully than fell to the lot of any other person on the medical staff of that island. As a considerable portion of this work consists of valuable and interesting matter, together with many original remarks and observations, we propose to furnish our readers with a concise abstract of its practical information, in a future number; as the room allotted to this 'Retrospect' does not admit of extensive quotations.

A LIST OF NEW MEDICAL PUBLICATIONS.

Annals of Medicine for the year 1798. Exhibiting a concise View of the latest and most important Discoveries in Medicine and Medical Philosophy. By ANDREW DUNCAN, Sen. M. D. and ANDREW DUNCAN, Junr. M. D. Fellows of the Royal College of Physicians, Edinburgh. Vol. III. pp. 556, 8vo. *Edinburgh*, Mudie; *London*, Robinsons; *Hamburg*, Perthes. Price 7s.

Contributions to Physical and Medical Knowledge, principally from the West of England: collected by THOMAS BEDDOES, M. D. pp. 539. 8vo. *Bristol*, Cottle; *London*, Longman and Rees.

Lectures

Lectures on Diet and Regimen; being a systematic Inquiry into the most rational means of preserving Health, and prolonging Life, together with physiological and chemical Explanations, calculated chiefly for the use of Families, in order to banish the prevailing Abuses and Prejudices in Medicine. By A. F. M. WILLICH, M. D. &c. pp. 643. 8vo. *London*, Longman and Rees. (Price 9s. in Boards.)

Biographia Medica: or Historical and Critical Memoirs of the Lives and Writings of the most eminent medical Characters, that have existed from the earliest Account of Time, to the present Period; with a Catalogue of their literary Productions. By BENJAMIN HUTCHINSON, Member of the Medical Society of London, of the Physical Society of Guy's Hospital, and of the London Company of Surgeons. Two vols. 8vo. *London*, Johnson. Price 16s. in Boards.

A Defence of the Cæsarean Operation, with Observations on Embryulcia, and the Section of Symphisis Pubis; addressed to Mr. W. SIMMONS, of Manchester, author of Reflections on the Propriety of performing the Cæsarean Operation: containing some new Cases, and illustrated by seven Engravings. By JOHN HULL, M. D. &c. *Printed at Manchester*, 1799, and sold in *London* by Bickerstaff, and *Edinburgh*, by Mudie.

FOREIGN PUBLICATIONS.

Collection de nouveaux livres elementaires, &c. A Collection of new elementary works: No. 1. Containing the wonderful structure of the human body, or Elements of Anatomy, for the use of youth. By L. F. JAUFFRIT. One volume 8vo. (1 livre 80 centimes) *Paris*, Dugour and Durand.

Des Maladies des Enfans.—Of the Diseases peculiar to Children, Girls, Pregnancy, and Child-birth. By N. CHAMBON, First Physician to the Army, &c. In four divisions; each two small volumes, 8vo. and sold separately, Price 10 livres. *Paris*, Dugour and Durand.

Meteorologie des Cultivateurs, &c. The Farmer's Meteorology, with an advice to the inhabitants of the country, relative to the preservation of health, and banishment of prejudice. Duodecimo, (1 livre) *Paris.* Fuchs.

Physische Ketzereyen, &c. Heresies in Natural Philosophy; or an attempt to introduce a more simple and easy method of illustration in Physics; by J. G. G. RUDIGEHN, &c. 8vo. 128 pp. 1799. *Leipzig.* Weygand. (Pr. 8 gr.)

Journal der Pharmacie, &c. The Pharmaceutical Journal, for the use of Physicians, Apothecaries, and Chemists: by Dr. J. B. TROMMSDORFF. Volume fifth, No. I. and II. together 610 pp. 8vo. 1799. *Leipzig,* Crusius. (1 Rixdoll 16 gr. or about 6s.)

*** *Want of room again obliges us to postpone the Account of several valuable new Publications, to a future Number.*

Account of Diseases in an Eastern District of London, from the 20th of February to the 20th of March.

ACUTE DISEASES.	No. of Cases.
Typhus Gravior	4
Typhus Mitior	3
Peripneumonia Notha	7
Hectica	2
Ophthalmia	1
Acute Rheumatism	3
CHRONIC DISEASES.	
Cough	17
Dyspnœa	12
Cough and Dyspnœa	10
Hoarseness	4

	No. of Cases
Hæmoptoe	2
Phthisis Pulmonalis	3
Anasarca	3
Ascites	2
Hydrothorax	2
Cephalalgia	7
Vertigo	3
Epilepsia	1
Ophthalmia	5
Gastrodynia	3
Enterodynia	5
Diarhœa	30
Diarhœa biliosa	12

Lienteria

	No. of Cases.
Lienteria - - -	3
Dysenteria - - -	2
Amenorrhœa - -	5
Fluor albus - - -	6
Chlorosis - - -	3
Cancer in utero - -	1
Enuresis - - -	2
Dysuria - - -	5
Hæmorrhois - -	4
Hernia - - -	2
Tremor - - -	2
Hysteria - - -	3
Hypochondriasis - -	4
Chronic Rheumatism -	15
Lumbago - - -	3
Sciatica - - -	2
PUERPERAL DISEASES.	
Ephemera - - -	2
Menorrhagia Lochialis -	3
Mastrodynia - - -	4
Rhagas Papillæ - -	3
INFANTILE DISEASES.	
Ophthalmia - - -	4
Ophthalmia purulenta -	3
Tinea - - - -	2

Since the last report, diseases of the pneumonic kind, both of the acute and chronic species, have been less frequent than in the former months; the return of easterly and north-easterly winds has, however, prolonged the duration of the chronic species of these diseases.

Disorders of the bowels have been very frequent, and, in some instances, very tedious and obstinate. They have appeared in various forms, but principally in that of *Diarrhoea*. The peristaltic motion of the intestinal canal has been increased to a morbid degree, and very frequent discharges of the contents of the bowels have taken place. These discharges have been different in their quantity and consistence, and attended with a variety of symptoms in different patients. Flatulence and borborygmi have preceded them in some instances, whilst in others, they have been preceded, and accompanied with a considerable degree of pain. Tenesmus and small discharges of a bloody and mucous appearance occurred, in some cases, towards the close of the disease. These symptoms however occurred without any primary fever, and the disease might be distinguished from dysentery by this circumstance, as well as by the discharges of fæces, which seldom take place in the latter disease. In some of the instances referred to in the list, the discharges were so frequent and hasty, that aliment passed through the intestines in an undigested form, which circumstance served to characterise that species of the disease, called *lienteria*.

Some of the patients were affected by nausea and vomiting, and most of them experienced a reduction of strength, and a considerable degree of emaciation.

This disease, when confined within due bounds, often proves beneficial to the constitution, and if not checked in too early a stage, will generally terminate very favourably; but the early use of astringents, to stop the discharge of opiates to relieve pain, or of warm and stimulating remedies to support the strength of the patient, are always injurious, and sometimes produce the most fatal symptoms.